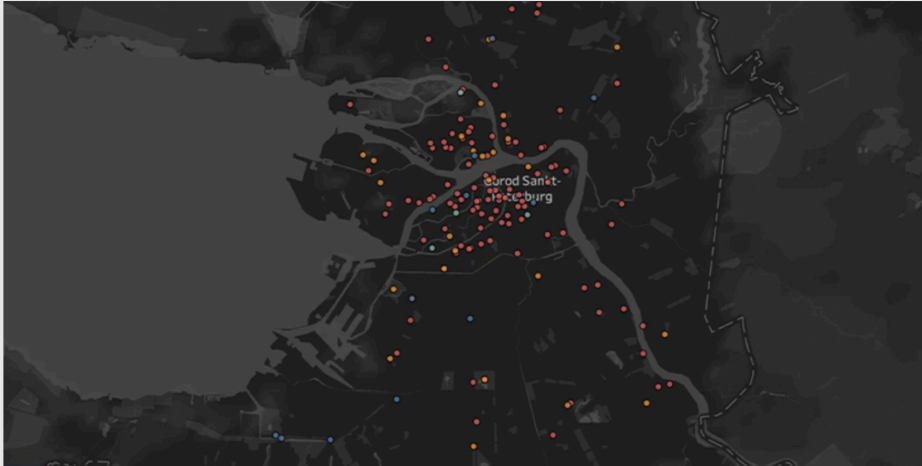


Проект MEMOMAP — исследование и публицистический проект о памятниках Санкт-Петербурга. Был создан в процессе написания выпускной работы на магистерской программе Университета ИТМО “Интеллектуальные системы в гуманитарной сфере”

MEMOMAP

SEED GRANT, ВЫПУСКНЫЕ ПРОЕКТЫ



#ready
#mastersproject
#seedgrants

ЕСЕНИЯ НОВОХАЦКАЯ,
АВТОР ПРОЕКТА,
ВЫПУСКНИЦА DH-ЦЕНТРА

Цель проекта состоит в привлечении внимания общества к историческим памятникам. Мемориалы постепенно теряют исторический контекст и сливаются с урбанистическим ландшафтом.

Проект ставит своей задачей изменить "слепое" отношение к памятникам и воодушевить жителей Петербурга и гостей города изучать истории, которые рассказывают мемориалы.

Ссылка на официальную страницу проекта: <http://memomap.tilda.ws/>

Ссылка на проект на сайте исследовательской лаборатории Университета ИТМО: <https://dh.itmo.ru/memomap>

Проект выиграл:

- Грантовый конкурс “Seeds grants” Международного Центра цифровых гуманитарных исследований Университета ИТМО;
- Конкурс НИВКР на лучшую научно-исследовательскую выпускную квалификационную работу Университета ИТМО 2021 года.

Проект был представлен на внутренних конференциях Университета ИТМО (Конгресс молодых ученых IX и X, 50-ая Научная и Учебно-методическая конференция) и на городских и международных конференциях (SPB DH Week 2020, Digital Краеведение 2020, 5th International Interdisciplinary Conference "Memory, Melancholy and Nostalgia" 2020).

Прилагаю подтверждения полученных грантов, участия в нескольких конференциях, а также полный текст выпускной квалификационной работы.

GRANT CERTIFICATE

Настоящий сертификат подтверждает, что

Новохацкая Есения Антоновна

является победителем грантового конкурса "DN Seeds Grants" Международного Центра цифровых гуманитарных исследований Университета ИТМО с проектом "Интерактивная карта памятников Санкт-Петербурга"

Руководитель МЦ цифровых
гуманитарных исследований,
к. культурологии, доцент

 Пучковская А.А.



Санкт-Петербург, апрель 2021



конкурс

НИВКР

на лучшую научно-исследовательскую
выпускную квалификационную работу

ДИПЛОМ

ЛАУРЕАТА

I степени

среди магистров

вручается

Новохацкой Есении Антоновне

Ректор
Университета ИТМО

В. Н. Васильев



IX КОНГРЕСС МОЛОДЫХ УЧЕНЫХ

ДИПЛОМ

ЗА ЛУЧШИЙ ДОКЛАД
МАГИСТРАНТА

награждается

**ЕСЕНИЯ
АНТОНОВНА
НОВОХАЦКАЯ**

Ректор
Университета ИТМО



В. Н. Васильев



X КОНГРЕСС МОЛОДЫХ УЧЕНЫХ

СЕРТИФИКАТ

УЧАСТНИКА

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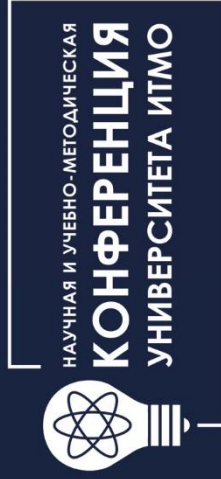
**Новохацкая
Есения Антоновна**

принял(а) участие в X Конгрессе молодых ученых

Ректор
Университета ИТМО



В. Н. Васильев



01.02.21
—
04.02.21

СЕРТИФИКАТ УЧАСТНИКА

50-Й НАУЧНОЙ И УЧЕБНО-МЕТОДИЧЕСКОЙ КОНФЕРЕНЦИИ
УНИВЕРСИТЕТА ИТМО

**НОВОХАЦКАЯ
ЕСЕНИЯ АНТОНОВНА**

Ректор Университета ИТМО



В. Н. Васильев

SPBDHweek

Неделя цифровой гуманитаристики
в Петербурге

27.01.–

31.01.2020

БЛАГОДАРНОСТЬ

Есении Новохацкой

За проведение лекции «Make history
great again: цифровая история»
в рамках SPBDHweek 2020



Антонина Гучковская
Директор DH Center
Университета ИТМО



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DH
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цифровых
гуманитарных
исследований



InMind Support
Conferences, Seminars, Workshops

Gdańsk, 11 December 2020

Certificate

This is to certify that **Eseniia Novokhatskaia** attended our 5th International Interdisciplinary Conference "Memory, Melancholy and Nostalgia" held online on 10-11 December 2020 and presented a paper: Studies on St. Petersburg Monuments: Mapping Historical Memory.

On behalf of the Organising Committee

Prof. dr hab. Wojciech Owczarski

Министерство науки и высшего образования Российской Федерации
ФЕДЕРАЛЬНОЕ ГОСУДАРСТВЕННОЕ АВТОНОМНОЕ ОБРАЗОВАТЕЛЬНОЕ
УЧРЕЖДЕНИЕ ВЫСШЕГО ОБРАЗОВАНИЯ
НАЦИОНАЛЬНЫЙ ИССЛЕДОВАТЕЛЬСКИЙ УНИВЕРСИТЕТ ИТМО
ITMO University

ВЫПУСКНАЯ КВАЛИФИКАЦИОННАЯ РАБОТА/GRADUATION THESIS

Памятники Санкт-Петербурга: создание карты исторической памяти города / Studies
on St. Petersburg monuments: mapping historical memory

Автор/ Author

Новохацкая Есения Антоновна

Направленность (профиль) образовательной программы/Major

Анализ культурных данных и визуализация/ Data, Culture and Visualization 2019

Квалификация/ Degree level

Магистр

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"ординарный доцент")

Группа/Group

D42423

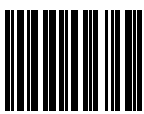
Факультет/институт/кластер/ Faculty/Institute/Cluster

институт международного развития и партнерства

Направление подготовки/ Subject area

45.04.04 Интеллектуальные системы в гуманитарной сфере

Обучающийся/Student

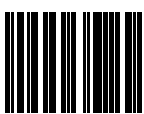
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Антоновна

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and surname)

Руководитель ВКР/
Thesis supervisor

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28.05.2021	

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and surname)

**Министерство науки и высшего образования Российской Федерации
ФЕДЕРАЛЬНОЕ ГОСУДАРСТВЕННОЕ АВТОНОМНОЕ ОБРАЗОВАТЕЛЬНОЕ
УЧРЕЖДЕНИЕ ВЫСШЕГО ОБРАЗОВАНИЯ
НАЦИОНАЛЬНЫЙ ИССЛЕДОВАТЕЛЬСКИЙ УНИВЕРСИТЕТ ИТМО
ITMO University**

**ЗАДАНИЕ НА ВЫПУСКНУЮ КВАЛИФИКАЦИОННУЮ РАБОТУ /
OBJECTIVES FOR A GRADUATION THESIS**

Обучающийся / Student Новохацкая Есения Антоновна

Группа/Group D42423

Факультет/институт/кластер/ Faculty/Institute/Cluster институт международного развития и партнерства

Квалификация/ Degree level Магистр

Направление подготовки/ Subject area 45.04.04 Интеллектуальные системы в гуманитарной сфере

Направленность (профиль) образовательной программы/Major Анализ культурных данных и визуализация/ Data, Culture and Visualization 2019

Специализация/ Specialization Методы исследования культурных данных / Cultural Data Approaches

Тема ВКР/ Thesis topic Памятники Санкт-Петербурга: создание карты исторической памяти города / Studies on St. Petersburg monuments: mapping historical memory

Руководитель ВКР/ Thesis supervisor Пучковская Антонина Алексеевна, кандидат культурологии, Университет ИТМО, институт международного развития и партнерства, доцент (квалификационная категория "ординарный доцент")

Срок сдачи студентом законченной работы до / Deadline for submission of complete thesis 26.05.2021

Техническое задание и исходные данные к работе/ Requirements and premise for the thesis

Collect the dataset of monuments of St. Petersburg in a way to fully represent the sites of memory meaning, provide a prototype of a project for monuments' history popularisation

Содержание выпускной квалификационной работы (перечень подлежащих разработке вопросов)/ Content of the thesis (list of key issues)

Historical memory concept interpretation and influence, sites of memory in urban space and their meaning, governmental open data and historical memory data, visualization on monumental historical memory

Перечень графического материала (с указанием обязательного материала) / List of graphic materials (with a list of required material)

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Исходные материалы и пособия / Source materials and publications

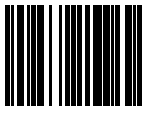
Ассман А. Длинная тень прошлого: Мемориальная культура и историческая политика. —

Новое Литературное Обозрение, 2018; Сафронова Ю.А. Историческая память: введение : учебное пособие СПб. : Издательство Европейского университета в Санкт Петербурге, 2019; Эткинд А. М. Кривое горе: Память о непогребенных. – Новое литературное обозрение, 2016; Etkind A. Mapping memory events in the east European space //East European Memory Studies. – 2010; Luxen J. L. Interpretation of sites of memory. – 2018.

Дата выдачи задания/ Objectives issued on 10.05.2021

СОГЛАСОВАНО / AGREED:

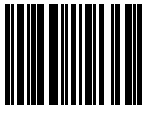
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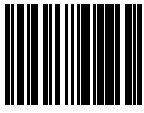
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**Министерство науки и высшего образования Российской Федерации
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УЧРЕЖДЕНИЕ ВЫСШЕГО ОБРАЗОВАНИЯ
НАЦИОНАЛЬНЫЙ ИССЛЕДОВАТЕЛЬСКИЙ УНИВЕРСИТЕТ ИТМО
ITMO University**

**АННОТАЦИЯ
ВЫПУСКНОЙ КВАЛИФИКАЦИОННОЙ РАБОТЫ /
SUMMARY OF A GRADUATION THESIS**

Обучающийся/ Student

Новохацкая Есения Антоновна

Наименование темы ВКР / Title of the thesis

Памятники Санкт-Петербурга: создание карты исторической памяти города / Studies on St. Petersburg monuments: mapping historical memory

Наименование организации, где выполнена ВКР/ Name of organization

Университет ИТМО

**ХАРАКТЕРИСТИКА ВЫПУСКНОЙ КВАЛИФИКАЦИОННОЙ РАБОТЫ/
DESCRIPTION OF THE GRADUATION THESIS**

1. Цель исследования / Research objective

The research objective is to provide a methodology of working with sites of memory and actualising them in a societal discourse that would potentially encourage productive discussion on historical memory.

2. Задачи, решаемые в ВКР / Research tasks

1. Review existing theories and models of monuments interpretation; 2. Describe potential challenges and opportunities in the interpretation of sensitive cultural sites related to memory, including the necessity of potentially dealing with conflicting views of the values of a site; 3. Suggest a digital representation method to achieve best interpretation at sites of memory.

3. Краткая характеристика полученных результатов / Short summary of results/conclusions

Despite monuments being a necessary part of a familiar urban landscape, society pays little attention to their meaning. The research not only provides the analysis for further studies in sphere of St. Petersburg historical memory, but also prepares a solid base for a public project. It also provides an accessible source with structured data on monuments in St. Petersburg and the prototype for and suggestions for further development. The research successfully fills the gap in monuments' history and meaning representation in the digital space and in current discourse.

4. Наличие публикаций по теме выпускной работы/ Have you produced any publications on the topic of the thesis

- 1 Novokhatskaia E.A. Studies on St. Petersburg monuments: mapping historical memory, 2021 (Тезисы)
- 2 Новохацкая Е.А. Памятники и мемориалы в городском пространстве // Культура и технологии [электронный мультимедийный журнал] -2021. - Т. 6. - № 1. - С. 21-25 (Статья; РИНЦ)

- 3 Novokhatskaia E.A. Visualising History and Memory: a Case of St. Petersburg//Сборник тезисов докладов конгресса молодых ученых. Электронное издание. – СПб: Университет ИТМО, [2020]., 2020 (Тезисы)
- 4 Новохацкая Е.А. Московский парк Победы в Санкт-Петербурге: анализ актуальности мемориала Великой Отечественной войны // ВОЙНА И ПАМЯТЬ: сборник научных статей, посвященный 75-летию Победы в Великой Отечественной войне -2020. - С. 157-164 (Статья)

5. Наличие выступлений на конференциях по теме выпускной работы/ Have you produced any conference reports on the topic of the thesis

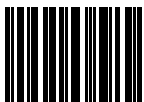
- 1 X Конгресс молодых ученых (КМУ) - Онлайн, 14.04.2021 - 17.04.2021 (Конференция, статус - всероссийский)
- 2 CHAIN conference 2021, 11.02.2021 - 13.02.2021 (Конференция, статус - международный)
- 3 Неделя цифровой гуманитаристики в Петербурге SPBDHWeek 2021, 25.01.2021 - 29.01.2021 (Конференция, статус - международный)
- 4 Всероссийская научно-прикладная конференция "Digital Краеведение 2020", 11.12.2020 - 11.12.2020 (Конференция, статус - всероссийский)
- 5 5th Memory, Melancholy and Nostalgia Conference, 10.12.2020 - 11.12.2020 (Конференция, статус - международный)
- 6 IX Конгресс молодых ученых, 15.04.2020 - 18.04.2020 (Конференция, статус - всероссийский)
- 7 4th Memory, Melancholy and Nostalgia Conference, 09.12.2019 - 10.12.2019 (Конференция, статус - международный)
- 8 Конференция "Сохраняй!", 23.11.2019 - 23.11.2019 (Конференция, статус - городской)

6. Полученные гранты, при выполнении работы/ Grants received while working on the thesis

- 1 Seed grant от Международного центра цифровых гуманитарных исследований (Seed grants от МЦ ЦГИ, год 2020)
- 2 Грант Правительства Санкт-Петербурга для студентов вузов, расположенных на территории Санкт-Петербурга, аспирантов вузов, отраслевых и академических институтов, расположенных на территории Санкт-Петербурга (Конкурс грантов для студентов вузов, расположенных на территории Санкт-Петербурга, аспирантов вузов, отраслевых и академических институтов, расположенных на территории Санкт-Петербурга, год 2020)

7. Дополнительные сведения/ Additional information

Обучающийся/Student

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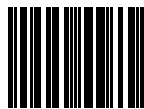
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Антоновна

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Руководитель ВКР/
Thesis supervisor

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INTRODUCTION

The issue of contested monuments became a burning social topic in the beginning of the 21st century. Despite monuments demolition being an inherent part of the cultural development for many nations, modern events seem different in a way how the conflict escalates and proceeds. Eastern European discussion over Soviet symbols or the United States Confederate monuments conflict may be examples of such events.

In this study, we consider monuments of St. Petersburg in Russia, the process of their establishment, their location and commemorative topics. The study is site-based, focusing on the interpretation of sites of memory. The research focuses on heritage places with memorial aspects, including those with divergent and controversial interpretations, and on the issues around the international recognition of sites of memory.

The city of St. Petersburg has a rich history of more than 300 years and was filled with historically and culturally important personas and events. A lot of notable people were commemorated in the form of a monument there and a lot of events have their memorials in St. Petersburg. Besides, St. Petersburg in recent years did not have any cases of monument demolition, however, there was some heated discussion about the need to establish new monuments or destroy old ones.

What multiple cases worldwide show us is that usually memorial conflicts are based on opponents having completely different knowledge of the historical event. So, the idea of how we could potentially help society to come to the consensus over monuments is to show a full picture to the audience, meaning all the represented memorial layers and to go in-depth into explanation and historical details to prevent this clash of opinions based on different knowledge.

The potential solution to provide such a deep analysis of urban memorial landscape will be a digital visualisation of sites of memory meaning in the city. The aim of such a map or catalogue is to combine historical, cultural and urban data and to present memorial heritage data of Saint Petersburg monuments through information technologies. This way it is possible to systematise memorial metadata and provide access to it through interactive visualisation. Most importantly, it is possible to distinguish the memorial part of the monument (emotions) and the historical part (objective knowledge).

The vital base for such a project is a dataset of sites of memory in St. Petersburg. The dataset provides information about different historical events and different personas connected to a particular monument. The dataset also helps researchers to analyse the memorial pattern of the city and what monuments currently influence the society the most and how.

The aim of the research is to provide a methodology of working with sites of memory and actualising them in a societal discourse that would potentially encourage societal discourse on historical memory.

Tasks of the research:

1. Review existing theories and models of monuments interpretation;
2. Describe potential challenges and opportunities in the interpretation of sensitive cultural sites related to memory, including the necessity of potentially dealing with conflicting views of the values of a site;
3. Suggest a digital representation method to achieve best interpretation at sites of memory.

Scientific novelty: Multiple separate studies were conducted regarding monuments and their influence on societal discourse over historical memory. However, regarding

Russian memorials, and especially St. Petersburg ones, there were little to no attempts on a complex approach to this issue. The research unites previous initiatives and develops them according to highlighted needs.

Theoretical and practical significance of the work: Despite monuments being a necessary part of a familiar urban landscape, society pays little attention to their meaning. This paper aims not only at providing a research part that can become a starting point for further studies in this sphere, but also to prepare a solid base for a public project. At the moment, there is no full dataset or accessible source with all the data on monuments in St. Petersburg, which shows current neglect from society and the government. The project is targeted at a wide audience with no specific preliminary knowledge, fulfilling the aim of bringing attention of the broad public to monuments and their meaning.

Methods of the research: The research widely uses digital humanities methods and approaches such as digital storytelling, data visualisation, data analysis, GIS. Tools used for the research include Tableau Public, R programming and Tilda Publishing for the prototype example.

The structure of the thesis is determined by the research tasks:

1. The theoretical part of the work is devoted to key theories in spheres of memory studies, digital humanities methodology and sites of memory theories. The first chapter provides deep theoretical analysis of monuments meaning and explores potential challenges for a project dedicated to historical memory mapping;
2. The practical part of the work explains the groundings of the project, the process of data collection and analysis, then proceeds with project development progress.

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CHAPTER 1 THEORETICAL FRAMEWORK

1.1 History and memory: conceptual difference

History and memory are two terms that go hand in hand in recent studies on society's past, however most of the time they appear in public discourse as synonyms. However, it is important to distinguish between those two terms, otherwise unnecessary and dangerous confusion can appear.

Considering what is history, we can say that it is an acknowledged academic discipline concerning the past of humanity and based on systematic research of historical sources using confirmed methods and providing results [1]. History is often approached or accessed through written documents but increasingly oral histories and other “non-traditional” means are being accepted as they offer unique insight into the past experiences of different societal groups [2]. All in all, history, being a science, aims to reflect the past in accurate description of events and concerns primarily objective knowledge.

Regarding memory we may say that this term refers to the ways in which people construct a sense or meaning of the past, and how they relate that past to their present in the processes of remembering — memorialisation [2]. Forms of memorialisation initiatives may include, but are not limited to, museums, commemorative ceremonies, apologies, the renaming of public facilities, reburials and memory projects [2]. Historical memory is passed along through the prism of the present and feelings and sensations of individuals [3]. Historical memory is not just a channel for transmitting information about the past, it is “an essential component of the self-identification of an individual, a social group, and society as a whole” [4]. If history as a science concerns

primarily objective knowledge, then memory concerns primarily emotions and feelings of society about the past, in other words how people remember their history. This being a fully different concept from history motivated a new academic sphere to appear — memory studies.

The very first theory considered to be the beginning of the Memory studies field was the concept of collective memory, introduced by a philosopher and sociologist Maurice Halbwachs in his work 'La mémoire collective' [5]. The concept of memory, as the idea of the past shared among the defined community or the whole society, has been offered by this work. The main function of collective memory is to give a member of the society the possibility to recall and re-experience an event important for the community that they did not take part in directly [5]. In contrast, each member of the community has personal memory, which, by Halbwachs theory, is defined by the collective memory and creates collective memory at the same time. However, the most valuable contribution of the theory is understanding that collective memory or any type of memory does not indicate any historical accuracy, thus cannot be trusted as a valuable historical resource.

Theory of Halbwachs is constantly criticised as the field of memory studies is being developed. In the 2000s a German egyptologist and historian of culture Jan Assmann clarified the term 'collective memory' and introduced a new idea of cultural memory, a form of collective memory shared among people of the same culture [6]. Cultural memory is not connected to the experience of individuals, it contains multiple memories attached to crystallised symbols of the past. It radically differs from communicative memory, another term introduced by J. Assmann, which is closer to private memory. Communicative memory is a memory of non-distant past shared by an individual with their generation and 2-3 generations past. Communicative memory depends on the experience, while cultural memory is fixed, structured and presented to the society by specialists [6].

Additionally, it is important to consider the topics rising in the collective memory. One of the most important things for society usually becomes the ratio of victims and heroes represented in the memorial space. This issue becomes especially burning in the context of societies which still hold a trauma of war or another conflict. Aleida Assman, a leading researcher of issues related to historical memory, writes that the memory of the winners is characterised by heroic self-enactment through memorials, political ritual celebrations and national symbols [7; 8]. The memory of the victim, according to A. Assman, may acquire the form of collective memory only if “the affected group [succeeds] in self-organising as a collective and a politically solidarity community” [8]. This means that the ratio of victims and heroes represented in memorial discourse may not only show the current state of historical memory, but also the agents and their power within the discourse.

When we study public representations of memory, sanctioned by the government entity, we also need to consider the political side of the subject. Politics of memory often dictates the narration of the society’s past as it is beneficial for the government. It either can be interested in people’s attention to the history or its specific part, or in people’s ignorance. The concept of collective memory goes hand in hand with understanding of nation and society. According to Ernest Renan, a 19th century french philosopher, what unites nations is two things: “one lies in the past, one in the present. One is the possession in common of a rich legacy of memories; the other is present-day consent, the desire to live together, the will to perpetuate the value of the heritage that one has received in an undivided form” [9]. Renan’s speech “What is nation?” highlights important understanding of memory and history for those who look at the society from the point of power and governance. Renan says that “progress in historical studies often constitutes a danger for [the principle of] nationality” because it “brings to light deeds of violence which took place at the origin of all political formations, even of those whose consequences have been altogether beneficial” [9]. It shows that for concepts like the united nation and society memory becomes more important, and history, being objective, can irrevocably ruin the solidarity.

Mosse's investigation showed that memory, being more important for society, becomes a huge part of politics, turning into political memory. The key to an attempt of 'new politics' is "to draw the people into active participation in the national mystique through rites and festivals, myths and symbols which gave concrete expression to the general will" [10]. Understanding the importance of memory, the modern government aims at controlling and navigating it for the society to stay united and loyal.

Cosgrove points this out as a negative aspect of the governmental will to involve people into the politics of memory, saying that politicians aim to "promote a single identity within the bounds of its territory" [11]. It is important to stress that this process has been strongly spatialised and frequently resisted in particular regions of the state where subaltern symbols and alternative versions of history prevail.

In conclusion, we will highlight main features of historical memory that are crucial for the research. Firstly, memory is subjective and fragmented, people remember the past differently, sometimes ignoring the accepted academic version of history and public agreement on what society considers to be a 'true' history. Secondly, private memory about the past and personal understanding of existing historical symbols may provoke the feeling of frustration and anger within the society towards crystallised memory they and their community do not agree with. Thirdly, politics tends to intervene in the collective historical memory, navigating the society and influencing the discourse to its benefit.

Regarding collective and cultural memory, we may say that heritage as a wide concept is strongly tied with the society's will to preserve the past and present it to the future generations. With time, however, the understanding of heritage was significantly broadened. In modern times, it is much more inclusive and often based on the concept of cultural landscapes and the historic urban landscapes approach [12].

Values and significance of heritage exist only because people or groups of people share specific understanding of them. However, due to different groups of people having various backgrounds, society may perceive a single site differently, and heritage sites will have different values for those groups at the same time. The values for which a site may originate not only due to architectural, but also due historical or entertaining reasons [12]. Most heritage places will have intangible values derived from peoples' feelings about, understanding of, and relationship to a place, its history, and the uses to which it has been traditionally put. The memory tied to the site sometimes becomes more significant for the society than the history portrayed in the site. The acknowledgement of a diversity of agents and their often divergent understanding of the associative values of heritage sites needs to be acknowledged for developing better approaches to interpretation.

In the 1972 Convention, heritage is divided into natural and cultural, though even then it was recognised that sites could be 'the combined works of nature and man' [13]. Sites can also be classified by use, for example as places of worship, or typologically by archaeological or architectural historical themes. However classified, any site can have strong associative values. The range of those values can be very wide, covering religion and society as well as commemorating specific events or happenings [12].

Some heritage places include associative values related to remembrance and commemoration and are often described as sites of memory, which we will closely review in the second chapter. These sites offer particular challenges and opportunities for interpretation in terms of heritage management. If a place's history is contested, developing inclusive interpretive plans through broad consultation at multiple levels (local, national, international) requires ethical approaches and appropriate methods in order to maintain the integrity of the interpretative process, ensure that stakeholders at all levels feel their perspectives have been considered, and — importantly — leave space for evolving understanding of the events being remembered at the site in the

future. These considerations apply to all sites of memory, and, indeed, to all heritage places with memorial aspects.

It is important to remember that there may be a need to include multiple narratives in interpretive plans in order to confront the lessons from the past effectively. A good recent example of this is the controversy over Confederate monuments in the United States which were constructed during the Jim Crow era. This example, and others, serve to remind us that it is often only through the passage of time that a community or society begins to understand and interpret memorials to specific past events seen as divisive or repressive. Sites can often have contested values even centuries after the events which are now remembered.

Controversial and problematic historical memory is something a lot of countries face these days. One of the well-studied examples is the United States, where the question of whether to dismantle or to keep the Confederate monuments in their places became an especially relevant issue at the end of 2017. The society has been divided on this question, with radical groups spreading violence across the country, while some left-leaning activists turned to vandalism due to the inefficiency of policy makers [14]. What Confederate heritage examples can clearly show us, is the reason why society is divided. If we dive into the nature of the controversy and analyse the rhetoric of both sides of the conflict, we see that it is rooted in misunderstanding of history and memory concepts.

With memorial conflicts being such an important part of modern societies, there are multiple methods of coping with the issues of contested sites of memory. All of them are represented in current events, especially extreme decisions. The first option, extreme one, is to destroy problematic heritage. The second option, another extreme decision, is to ignore or silence the problem: heritage objects stay without any changes and are pushed away from the public discourse. Finally, the third option is bringing context to heritage, on the contrary, bringing it back to the discourse.

At first sight, the demolition of contested sites and ignoring their contested nature seem very different. In the first scenario the society does not have a monument reminding them of traumatic past; the second scenario, however, relies more on the concept of ignoring the problem, i.e. not highlighting it. However, if we look closer, both strategies reach the same result. The general public might not notice the object of heritage or its disappearance. The specific groups holding traumas or contested versions of memory, however, are those who feel the harm of these actions. These groups will not have a relief point, a moment of forgetting and rethinking the situation. Both of these strategies lead to radicalisation of either those who were against the heritage, or those who were supporting it.

The recontextualisation option tries to solve the issue both for the general public and groups whose interests are strictly connected to the site in question. The process of recontextualisation is supposed to provide people with arguments for productive discussion and to make this discussion objective. Due to memory being more about emotions rather than facts, this context will clarify all points of disagreement, which are the main part of controversy in such social issues.

These days, there are several ways to create a context which can transform the discussion about the contested heritage. First of all, it is possible to provide info-signs that explain the many-sided history of the site.

Secondly, there is an option of “balancing out” the controversial message. This concept is widely illustrated by Charging Bull on Wall Street in New York which was supported by the sculpture of Fearless Girl in 2017 with the sign “Know the power of women in leadership. SHE makes a difference” [15]. The goal is to find a problematic statement carried by the initial monument and balance it out with a counter-statement. For example, the controversy of the Confederate statues could have been solved by

accompanying them with statues dedicated to victims of slavery and those who fought for their freedom.

Thirdly, there is an option of putting heritage sites into the museum, making them visually a part of history but separating them from the modern agenda. "Statues or monuments to the dead ... owe their meaning to their intrinsic existence ... (and) one could justify relocating them without altering their meaning" [16]. The argument here is to physically remove monuments from the space of present times (urban everyday landscape) and move them to museums, attaching them to the representations of the past.

Finally, there is an option of actualisation through art: it includes traditional art forms (sketching, non-fiction movies, public art) and digital art forms like projects presented at the site or online projects. The main idea of art is to make the problem relevant again and provoke a discussion, guiding it in a productive and non-violent way.

1.2 Monuments as sites of memory

One of the crucial theoretical frameworks for this research is the theory of sites of memory (or realms of memory) introduced by a French historian Pierre Nora [16]. In 1984 — 1993 together with the other French scientists he developed an ontology of sites of memory in France, as a part of French national identity research. Sites of memory (*lieux de mémoire*), the central term of Nora's work, are an embodiment of ideology, «extremely ideological, full of nationalism, and far from being neutral or free of value judgements» [17]. Nora observed that most of the sites of memory were created solely for the purpose of indoctrination and serving the government in its goal of uniting the nation. He defined a site of memory as any significant entity, whether material or non-material in nature, which by dint of human will or the work of time has become a

symbolic element of the community's memorial heritage [16]. Sites of memory, in his view, could include: places such as museums, cathedrals, mosques, temples, palaces, cemeteries, archives and memorials; concepts and practices such as commemorations, mottos, and all rituals; objects such as inherited property, commemorative monuments, manuals, emblems, basic texts, and symbols. In such a definition, sites of memory can have both a positive aspect, through an anthropological approach and consideration of the (past and present) context, or a negative aspect in the form of a nationalist or particularistic approach, not open to external or divergent views [16].

Nora claims that with the demise of peasant society sites of memory have replaced real environments of memory—"true memory, which has taken refuge in gestures and habits, in skills passed down by unspoken traditions, in the body's inherent self-knowledge, in unstudied reflexes and ingrained memories" has been replaced by modern memory which is self-conscious, historical, individual, and archival [16, 18]. This distinction between true and modern memory becomes more persuasive when connected with the style of politics associated with the rise of the national state, where extralocal memories are intrinsic to creating Imagined communities' and new memories necessitate collective forgetting or amnesia [19, 20].

The concept of "site of memory" has a strong connection to the concept of collective memory. According to Nora, sites of memory are the physical representation of sometimes «not accurate» history [17, 21]. Moreover, the perception of the past is constantly changing through time, as well as collective memory. It is logical to suggest that physical representation of an old interpretation of history, e.g. monuments, is not appreciated by the members of the society after a dramatic switch in understanding of their mutual past.

Etkind, reviewing Nora's theory, notices an extreme focus on sites in comparison to overall picture and social discussions over history and memory. For Etkind, sites of memory, especially monuments, are like "crystals, appearing in the solution of

memory” [22]. Key feature for monuments to appear naturally is public consensus. Monuments represent *hard memory* in contrast to soft memory — they cannot survive without constant discussion and revisiting from soft memory. “Monuments are invisible when they are not written or talked about”, says Etkind in his work [22].

Another important idea that Etkind brings up in his work is connected with politics of historical memory. Monuments become centres of *acts of memory* — a case of revisiting the past, which changes certain fixed cultural practices and traditions [23]. Everything that happens with monuments — establishment, renaming, moving, acts of vandalism, demolition — are political actions which force society to question the monument and the past it represents. Thus, the authority of those who established the monument becomes questionable, which means the government and people in power do not like to establish monuments related to their guilt and crimes [22].

There has been a recent upsurge of interest in collective memory, especially as it relates to the experience of two world wars. Historians have begun to trace the origins of a new, more democratic, style of war memorial, which iconographically moved away from the commemoration of generals or rulers to the acknowledgement of the role of ordinary soldiers and armies in the war effort [24, 25].

For this paper, we will work out a general description of a site of memory and an origin of their value for the community. Sites of memory for the purposes of this work are places which are vested with historical, social or cultural significance. Such places can be of particular significance given their role in shaping the identity of a community or nation. Some are obviously primarily sites of memory and their principal value is generally seen as such. Others will have aspects of memory among their values which may not be seen by the public at large as the principal aspect of their value.

Some sites have more than one meaning. Many sites of memory may also have spiritual or religious values. The potential range of sites of memory is very broad, ranging from

ancient archaeological sites to rather recent sites with memorial aspects. Many sites of memory will have other uses or meanings, which may or may not be related to the memorial aspects and for many others the memorial aspect will only be one part of their heritage value [26]. Examples of sites of memory include museums, temples, cathedrals, mosques, palaces, cemeteries and memorials, inherited property, commemorative monuments, settlements and groups of buildings as well as archaeological sites. This work will primarily focus on monuments, which significantly limits the uses and meanings diversity of sites of memory. This helps to figure out the general way to approach controversial sites.

First and foremost, in the search for a monument's message and truth, one should define the monument itself. In this research we narrow down the definition of the memorial from a very general one to a version specifically suited for the research problem.

First of all, a monument is a physical object. Most of the time, a monument has either an abstract form (obelisk, stone, etc.), or a form defined by the meaning (for example, sculpture). Secondly, a monument is a site of historical or cultural importance or interest. Monuments traditionally become attractive for the local community or tourists due to their value as a piece of art or due to their relation to history [26]. For this research, the last group is the most important, this is why the final definition of what monument is will be exploring its historical relations. Monument is a commemorative object dedicated to a notable person or event. It is defined by what or whom the society or the state (depends on who has the authority to decide this) considers it to be important and vital for remembering in the future.

What also needs to be defined is a message the monument transfers. The initial intention of the memorial establishment is fixing the memory of the past. Which means that the aim of the monument is to remind people of the past events or about the person and his or her achievements and contribution to the society. We commemorate people or events

to remind ourselves about them and to tell others who come after us what we remember about them.

The productive way to interpret monuments looking at the process of them stopping being relatable is to identify them as symbols. Monuments as well as grand celebrations of the past, historical exhibitions in museums, war literature etc. are all parts of historical memory and memorial politics chosen by the state. Historical memory is what we as people remember about our past and our history, memorial politics is what the state chose for us to believe in and the state chose to encourage or silence [26].

Monuments work as symbols of the past. When we call the monument a symbol we imply a certain connection between the monument itself and the meaning behind it. The significant thing that differs symbols from other signifiers like icons and indexes is the absence of inherent connection [27]. Symbols have no resemblance between the signifier (monument in our case) and the signified (monument's meaning). The connection between them must be culturally learned otherwise it does not exist. What drives from this understanding is an idea of extremely thin relation between what we sometimes perceive as inherent and obvious, especially in terms of monuments to certain people. What can be more obvious than a connection between the name of the person and the statue of this person? In terms of monuments it is important to understand that this connection was culturally created and can be lost easily.

Using Anderson's [19] thesis that nations are 'imagined political communities' as a guiding principle, we can argue that an examination of public statues enables the researcher to gain some insights into how the public imagination is aroused and developed in the context of the ongoing task of nation-building.

In the modern examples we can see that there are several things that can go wrong with the monuments. First of all, the process is connected to the appearance of new information. The monument is a powerful statement, it inherently claims that anything it

represents is valuable and important for society and for history. However, we know that history is always reviewed, and sometimes historians discover crimes or overall inappropriateness of the person or event that collective memory cannot protect. The society absorbs new information and starts to question the importance of a represented person or event, thus, questioning whether the related monument should stay or not.

Another part of memorial conflict is connected to the process of change in collective memory. As we already mentioned above, the monument is a crystallisation of this memory [22]. It is logical to suggest that physical representation of an old interpretation of history, e.g. monuments, is not appreciated by the members of the society after a dramatic switch in understanding of their mutual past. However, monuments cannot change by themselves, at the same time collective memory can evolve through time. The monument is a finished physical object that can stay, be destroyed or changed, but any of those things should be done by the people. First problem that arises here is the feeling that the monument tries to preserve the collective memory in a stable form which can drive groups of people who want change against this monument. Another problem arises at the stage of the action — not everyone agrees with changes in collective memory and wants to preserve the monument preserving the past. Indifferent to the collective memory groups may also find themselves on the side of monument protectors due to the form of habit and unwillingness to change their surroundings radically.

Finally, in the example of the United States, we can see that sometimes monuments do not necessarily represent the true story. Monuments being symbols are constantly used to support propagandistic ideas of the past or present state. The people do not always clearly know the intentions that are hiding behind the monument establishment. However, they accept it and trust it because of the concept we discussed above — monument means important.

1.3 Digital Humanities approach to historical memory

The complexity of monuments' essence as well as the whole concept of memory leads to an inherent need to search for new solutions and projects. This need brings us to a field of digital humanities. "The phrase [digital humanities] has use-value to the degree that it can serve as an umbrella under which to group both people and projects seeking to reshape and reinvigorate contemporary arts and humanities practices, and expand their boundaries" [28]. Monuments and their history need to be reshaped in a public eye, as well as become an accessible stakeholder of history and memory in the society. So, any project that aims to re-tell their stories should consider digital humanities a field to work in.

Digital humanities is a comparatively new field of science which is inherently interdisciplinary. It emerged in the middle of the 20th century and started in a sphere of competitive linguistics [29]. Approximately at the same time, around the 1960s, digital history began to develop. It started from quantitative analysis of demographic data and was rooted in the rise of social history studies. By the beginning of the 21st century historians actively began using various software to develop digital history projects and research [29].

Examples of digital history projects vary from simple data collection to enormous projects on complicated historical issues. Multiple studies in a sphere of digital history are connected to topics that were never covered before due to data absence or the topic being stigmatised and forgotten in general. For example, The Texas Slavery Project¹ presented in 2007 used digital technology to map and understand the spread of nineteenth-century American slavery into places beyond American borders. The project

¹ Link: <http://www.texasslaveryproject.org>

website contains maps, database and graphs of narrative changing statistics in a slavery discourse [30].

For studying and presenting Russian history and Russian historical heritage the project “1917. Free History” was a great breakthrough. Created by Mikhail Zygar and his team, the project became a revolution in perception of historical events. The “1917” covers the events of Russian Revolution and is presented in the form of a social network. The source base is diaries, letters, memoirs and newspapers of 1917, everything is based primarily on Russian Revolution witnesses. The project’s timeline begins on November 14, 1916 and ends on January 18, 1918 [31]. The project was a huge success and opened a way to other digitised historical storytelling projects about Russia: “1939live”, “History Map”, “1968 DIGITAL”, etc.

Considering projects on monuments and monumental heritage, there are several issues creators develop in their projects. Some projects are concerned with virtual restoration of lost monuments, e.g. “The Missing: Rebuilding the Past” exhibition², some projects aim to preserve or restore the look of the monument in the past, for example, “The Colours of the Ara Pacis” project³, and some researchers are concerned with the controversial nature of the monuments and aim to show it through the project. For example, in 2019 the Southern Poverty Law Center published an updated version of the extensive research and the data it is based on regarding Confederate monuments in the United States⁴ [32]. The study extensively explains the intention behind Confederate monuments establishment through analysing the time they appeared and other details of their history. Also, the research puts monuments in a present context, providing current society’s opinion on them in different states.

² Link: https://shivagallery.org/featured_item/the-missing-rebuilding-the-past/

³ Link: <https://www.digitalmeetsculture.net/article/digitally-colouring-our-historical-monuments/>

⁴ Link: <https://www.splcenter.org/20190201/whose-heritage-public-symbols-confederacy>

Why can the report on Confederate monuments and the research in general be inspirational for other topics and contexts? The study on symbols of the Confederate past in the modern United States considers them neutrally, digging for their true meaning. It connects the timeline, the spatial distribution of monuments and the way the monuments look all together to provide a deep explanation of why certain monuments harm the society and the ongoing discourse about the Civil War memory that divides the nation. It serves as a well constructed argument based on evidence and statistics and thus helps the society to move forward in the discussion. The study does not value monuments inherently, authors challenge the idea that the monument deserves the consideration and respect for its existence, while stating that every aspect of the memorial should be studied before jumping into conclusions if it is important for the community or not.

Several most notable tools the research used are mapping the monuments with supportive statistics and a timeline of monuments creation put in a historical context of important events. The project fully relies on visual representation of collected data instead of only presenting a dataset and conclusions drawn from the data. Visual component of the study provides an understandable and accessible argument for the general public. Any type of visualisation is used to present a large amount of information coherently, covering different viewpoints, and providing multiple levels of details [33].

Visualisation of the data becomes the most crucial part of such a project. The approach to creation of well developed visualisation can be divided into six key steps: mapping, selection, presentation, interactivity, usability, and evaluation [34]. This classification identifies major tasks which need to be covered to achieve better visualisation. The first step of the data visualisation process — mapping — needs to identify how to encode information into visual form. Well-executed mapping helps to achieve an accurate relationship between data instances and visual representation forms. In the case of monuments we can say that the spatial aspect of monuments and the time aspect are the

most valuable instances for the study. The spatial component can be realised via map, and the time component — via timeline graph.

The second step of the visualisation process — selection — aims to limit the available data to the data which suits the final task of the research. Selection of the data is also connected to the first step of mapping, meaning it is influenced by the final decision on visualisation. This step also includes adding data if it is missing to fit the planned visualisation scheme. In case of monuments we can assume that the location of the monuments need to be present, as well as data on the time period of the monument. Considering the concern of monuments' meaning, we also can assume that the study needs to differentiate between the time of monument's establishment and the time of an event or a person the monument is dedicated to.

The third phase of the process — presentation — manages and organises final information for the project's aim. All visualisations and the data excerpts need to be presented in the most meaningful and understandable form. For example, if the project aims to be educational for the general public, the form will be, for example, a website, a mobile app, i.e. something that any person has easy access to. Alternatively, if the project pursues an exclusively academic goal, the form of presentation will be an article, a manuscript or a conference presentation. The fourth step adds the interactive aspect to the presentation, which is highly important, especially for public projects. User friendly interactivity enables users to explore presented findings, and improves their exploration level.

The fifth and the sixth steps of the visualisation process — usability and evaluation — are mainly connected to the post-prototype stage of the project. To fully understand how well the previous stages were executed, the test run should be made and the response should be gathered. Alfredo et al, categorise usability evaluation methods into two broad categories i.e. analytical evaluation and empirical evaluation. Analytical evaluation includes expert reviews and cognitive walkthroughs. Empirical evaluation

includes controlled experiments, questionnaires, interviews and focus groups [35]. After finding any usability problems and developing guidelines for modification, the project can be considered to be on the final stage. To fully finalise the project, the prototype management should be executed, and the main version of the project should be released.

CHAPTER 2 PRACTICAL PART

2.1 Project description and groundings

Considering the complicated nature of monuments it is important to find a way for their representation in a public discourse. The tool used for this kind of task needs to be available for the general public (both being accessible technically and understandable for people without specific knowledge), inclusive (taking into account all of the monuments equally, despite their location or them being recognisable and famous), and flexible (being able to change with the public discourse state).

Tools for monument representation can vary from a simple database to physical museums or exhibitions. The choice of the tool for this research, however, is a digital interactive map. According to Bodenhamer, people are inherently spatial beings, they “live in a physical world and routinely use spatial concepts of distance and direction to navigate our way through it” [36]. GIS (Geographic Information System) technology usage is widely spread among the humanities specifically because it helps society to understand accumulated knowledge better and see it in a context of space. Usage of GIS is inherent for a lot of projects in the digital humanities sphere, because it “requires collaboration between technical and domain experts”. “It demands the use of spatial questions, whereas most humanists think rarely about geographical space and often do not understand how to frame a spatial query. <...> It forces data into categories; it defines space in limited and literal ways instead of the metaphorical frames that are equally reflective of human experience; and, while managing complexity within its data structures, it too often simplifies its mapped results in ways that obscure rather than illuminate” [36].

In terms of monuments and questions of memory in general, Bodenhamer believes GIS is a solution for the society discourse. “Memory is essential for our identity, whether as individuals or as a society, but it remains troublesome as evidence because it always is informed by what has happened in the interim between an event and the act of recall. This condition makes memory dynamic, malleable, and contested. <...> Through this process [GIS] we construct the stories of ourselves, and in this way we create the various narratives that recount our communal history. But unlike personal memory, which seeks to reconcile or hide our interior conflicts, communal memory becomes contested public space” [36]. He introduces a deep map term, which is described as a “new creative space”. Deep maps are visual, time-based and structurally open, combining multiple data layers and media, introducing a background for “negotiation between insiders and outsiders, experts and contributors, over what is represented and how” [36]. Deep mapping is a necessity for historical memory projects, being the conversation openers and common background providers.

Considering the criteria of accessibility, the digital interactive map covers all the necessities listed above. Digital map is available for the general public — it does not require a physical presence of the person, it is simplified to the visual representation of monuments’ locations and stories attached to them. It does not contain any specific knowledge which would require deep research and academic skills. The only issue with accessibility of a digital map is connected to the access to the Internet. However, the choice of a digital map was made to bring the Internet requirements to middle and low connection speed. Interactivity of the map is fully optional.

Digital map is also inclusive — technologies allow massive data to be stored in a map and be represented by request. The project does not need to value some monuments more than others to fit the information to limits of a physical map, for example. All monuments can be represented equally. The digital map is a modern way of creating a deep map Bodenhamer was talking about — it has an ability to store multiple layers of data visualisation and have them accessible by the request.

Finally, a digital map is flexible. If a monument is destroyed or a new monument is established, the new data can be easily added to the dataset that the map is based on, and it will appear on the map. It does not require the map to be redrawn. The project does not need to be shut down and redone, minor fixes are planned and possible.

Besides a map, the project uses additional timeline visualisation to provide context and deep analysis to the map. In terms of the research and memorial issues attached to monuments, the chronology question stays one of the most important ones to look at. A timeline explains the sequence of events and is able to portray exceptions in tendencies, outliers, efficiently. Timelines may be of two types — linear timeline and comparative timeline. Linear timeline is an order of events that occurred in a specific period of time, it can be represented as horizontally or vertically. Comparative timeline is two sets of events that occurred at a place or a set of events that occurred at two different places that may or may not be compared but can be deduced for some sort of knowledge [37]. The project uses both to show different aspects of the process of monuments' creation.

Considering the public presentation of the project, the final form should be based on full understanding of the goal, the audience and the story the project needs to communicate. The primary goal of the project is to show the importance of historical monuments in the city and the message they send to the public. Monuments are one of the most effective things to tell people about local and national history, but also they are very effective in translating propaganda and historical myths. The main audience is people who live in St. Petersburg, because this is their context of living — they interact and see these monuments on an everyday basis. Also, the narrow target group of the project would be people around 18-50 years old. One of the crucial historical events which influenced historical memory a lot — World War II, personally touched the private memory of people as well. In each family the events of World War II were interpreted through the lenses of personal trauma, loss and grief. With each iteration of retelling the story, it evolves into a new form of commemoration — the current generation tells the

next generation about the war without ever seeing it. People between 18 and 50 know about the war through the lenses of their parents and grandparents. Some historical accuracy could get lost in the process of retelling stories. At the same time, personal memory gets into conflict with the general narrative of the state about World War II, which is mostly celebratory. Clarifications of historical commemoration are needed primarily for current and future generations not to lose historical accuracy and not to lose the prior forms of commemoration.

The story the project needs to communicate is built on the base of “then and now” narrative and circles around the idea of what happens when we don’t know history well. Briefly, the storyline of the project is how society through its history commemorated its past and how it struggles to rethink the monumental commemoration objects due to high level of attachment.

2.2 Dataset collection

The governmental open data was chosen as a primer data resource for the research for two major reasons: first of all, easy access, secondly, the quality. Data provided by the government can also show us some insights into how the state perceives the monuments, what monuments are considered important for the state etc.

The main source of open data for the research is the St. Petersburg Open Data website⁵. It contains around 200 datasets on different topics related to the city. It was decided to firstly check which datasets contain the word monument (“памятник”) or memorial (“мемориал”). The results were 10 datasets, most of which fall into category either Tourism or Culture (“Культура”, “Туризм и отдых”). Going through every dataset we checked what this data is and how research can benefit from it. Relevant data for the

⁵ Link: <https://data.gov.spb.ru>

research was connected specifically to monuments (not architectural heritage, for example).

Most of the datasets contained data on museums and buildings. A few of them contained mostly data on the public transport routes, so the word monument appeared in the search due to some bus stops named after the monument nearby. As a result, following datasets with most relevant data were taken as the base for the research: “Объекты культурного наследия на территории Санкт-Петербурга” — 84 entries on monuments; “Достопримечательности” — 268 entries; “Объектно-адресная система Санкт-Петербурга” — 24 entries⁶.

Three initial datasets are messy and structured differently (Table 1). All of them have a variety of issues, so a large part of the work was to clean them and to bring them to a common structure. Three major steps of managing the data were: working out the structure of the main dataset,

Pilot dataset	OSM dataset	Final dataset
193 entries	519 entries	255 entries
messy data and excessive data	missing data	finalised data, but still misses some entries

Table 1 — Datasets evolution

combining three datasets into one through code, manual cleaning of the data. Also, to check the missing data two additional sources were used: OpenStreetMap data and Encyclopaedia of St. Petersburg website data.

The structure of the main dataset has to contain both data on the monument and on its meaning. This data should be divided as clearly as possible for the analysis to be comprehensive. We have parameters like *date*, *story* and *picture*. All of these parameters exist twice: once for the monuments (object), once for the subject. Parameters *name*, *address* (as well as *longitude* and *latitude*), *material*, *type*, *author* and *inscription* describe the monument as an object. Parameters *commemoration topic* and

⁶ Open data is regularly updated. The date of datasets download is 26.10.2020

commemoration subtopic provide additional description of the monument's meaning. Some of the parameters need more detailed explanation and justification.

Parameters *mon_date* (monument) and *subj_date* (meaning) represent the point of the time when the monuments were established or the meaning took place. The research does not use the full date and uses only the year of the event. In terms of monuments dedicated to certain people, it was decided to use the year of person's death as a *subj_date*. When we talk about historical memory, we inevitably speak of past events and people who are no longer alive. The choice to indicate the year of death allows us not only to make the analysis easier in terms of data comparison, but also allows us to point out cases when the monument was dedicated to the person, who was still alive at the time. Traditionally monuments are established to commemorate people who passed away. Like monuments which are established on the graves, monuments in the city are a public way to commemorate a noble person. For the monument, in cases when the memorial was moved or destroyed and rebuilt we consider the very first year of establishment, highlighting the initial date of commemoration intention. Destroyed monuments which were not rebuilt are not included in the dataset. If the monument was being built in more than a year, we take the last year of the period as the date of construction.

The parameter *material* is fully responsible for the material the monument is made of. In cases when several materials were used for the monument (usually, the base, the sculpture itself and details are made out of different stones or metal), the material of the sculpture is considered the main one.

The parameter *type* is responsible for the form of the monument. The typology uses terms like *sculpture*, *bust*, *obelisk*, *column* and more. For the purpose of this research, category *sculpture* contains only monuments of a full height human figure. If the monument consists of more than one figure or represents a massive cluster of sculptures on one specific historic topic, the word *memorial* is used.

The parameter *com_topic* separates the dataset into major groups of monuments divided by the topic of commemoration. The major groups are: *person*, *event*, *group* and *other* (Image 1). The parameter *com_subtopic* narrows down the categorisation and divides groups above into smaller

monument			
event	group	person	other
civic	civic	art	city
revolution	fighters	civic	science
victory	revolution	military	
ww2	soldiers	navy	
	victims	politics	
		science	

Image 1 — Parameters *com_topic* and *com_subtopic*

groups united by the same topic. For example, the category *person* is divided into groups of people connected to different spheres: *politics*, *military*, *art*, *science*, etc. It is done to clearly identify personalised and non-personalised monuments from each other and then study them separately (for example, abstract war monuments and personalised war monuments).

The structure of the dataset is derived from several important questions and issues we need to review when interpreting a site of memory. First of all, we need to understand whom we commemorate in a form of monuments, thus we need names of the monuments, dates of commemoration and of the event connected to the monument and history of the monument and the event behind it. Second of all, we need to understand the spread of monuments in urban space, thus we need geolocations. And, finally, we need to understand more about what monuments look like generally in urban space to highlight specific patterns of commemoration in St. Petersburg which could presumably line up with patterns in other regions in potential future comparisons.

The research began with a pilot dataset which was collected from the Open Data and processed fully manually. The aim of the pilot dataset was to highlight the main trends of the data and to plan the future work. However, the manual cleaning resulted in missing and incorrect data. Despite the primary data being messy, the visualisations of

the data highlighted important details for the future analysis that needed to be emphasised in the main dataset. Visualisation clearly shows tendencies in monuments establishment and the potential behind the thorough research of monuments' meanings. Same tendencies appeared later in the main dataset. All visualisation and analysis will be provided in paragraphs 2.3 and 2.4.

The next step was to make an attempt to support the pilot dataset by parsing the Open Street Map data. Despite OpenStreetMap data having precise monuments' location data and some data on inscriptions, it completely lacks the rest of the data required for the analysis.

```
> str(monuments)
'data.frame': 255 obs. of 15 variables:
 $ name      : chr  "Александровская колонна" "Александру Невскому" "Александру Невскому" "Алексееву В. П." ...
 $ mon_date  : int  1834 2002 1985 1928 1994 1991 1974 1913 2015 1837 ...
 $ subj_date : int  1812 1263 1263 1919 1918 1966 1906 1913 1983 1818 ...
 $ address   : chr  "г. Санкт-Петербург, Дворцовая пл." "г. Санкт-Петербург, пл. Александра Невского" "г. Пушкин, Софийская пл., 1" "г. Санкт-Петербург, пр. Стачек, 22" ...
 $ material  : chr  "granite" "bronze" "bronze" "bronze" ...
 $ type      : chr  "column" "sculpture" "bust" "bust" ...
 $ com_topic : chr  "event" "person" "person" "person" ...
 $ com_subtopic: chr  "victory" "politics" "politics" "civic" ...
 $ author    : chr  "Монферран О., Орловский Б. И." "Козенюк В. Г., Пальмин А. А." "Козенюк В. Г." NA ...
 $ longitude : num  30.3 30.4 30.4 30.3 29.9 ...
 $ latitude  : num  59.9 59.9 59.7 59.9 59.9 ...
 $ description: chr  "Архитектор: А. А. Монферран . Памяник победы в Отечественной войне 1812 г. на Дворцовой площади. Названа в ч
ест" | __truncated__ "Автор скульптуры – В. Г. Козенюк, доработки памятника – А. А. Пальмин." "Подписи: на плинте бюста справа: Ск.
Козенюк. 1985 г. Надписи: на кольце в арке литыми знаками: 1240 – 1990; на" | __truncated__ "Алексеев Василий Петрович (1896-1919)
– рабочий Путиловского завода, член Нарвского райкома РСДРП, один из орга" | __truncated__ ...
 $ inscription: chr  NA NA "Подписи: на плинте бюста справа: Ск. Козенюк. 1985 г. Надписи: на кольце в арке литыми знаками: 1240 –
1990; на" | __truncated__ "Надписи: на постаменте с лицевой стороны врезными тонированными знаками: Вася Алексеев / Один из основат
елей / " | __truncated__ ...
```

Image 2 — Final dataset

It was decided to start again with three initial datasets from governmental open data and proceed with merging datasets through code, bringing them to a single unified structure. Code allowed to merge three datasets, delete repetitive data and extract longitude and latitude data by address. Full code can be found in Appendix A, and the dataset summary is presented in the Image 2.

The initial open data, supposedly being collected mostly manually, could not be fully processed by code. After the code merging and initial cleaning, the manual cleaning step began. The list of major changes done by hand: date of monument's establishment

limited to one year (data review according to the rules of the parameter listed above) and date of the meaning is manually created (none of the datasets highlight this data); sculptures with no historical or memorial meaning are taken away from the dataset (some of them were coded as monuments in the “Достопримечательности” dataset); the column description is manually separated into *material*, *type*, *author*, *inscription*, *monument story* and *subject story* (partially data is missing due to not all monuments have extensive description). Additionally, through manual cleaning the mistake of geolocation data was discovered, so the dataset was run through the longitude latitude data extraction code once again.

Manual cleaning and search for additional data showed that the dataset misses a lot of monuments yet. For example, the resource Wikipedia contains an article of supposedly all Lenin’s monuments — destroyed and existing. For St. Petersburg, the article shows three times more existing monuments than the final dataset contains. However, for the sake of pointing out the issue of neglecting monuments, it was decided to focus on open data primarily. The potential solution of supporting the dataset with additional missing data is presented in the Conclusion of the research.

2.3 Map of the monuments

After collecting the data into one dataset and finalising all the preparations, two major steps of visualisation begin. The first step is the map creation. For the sake of the project aim, which is primarily to communicate the importance of monuments and their history to the society, the data was put in a form of interactive map, created using Tableau Public resource. The element of interactivity, as discussed above, is inviting the general public to the discourse and to the study in general, potentially making the

involvement percentage higher. Interactivity also allows us to filter the data on the map in real time⁷.

The map contains some mistakes, however (Image 3). For example, several monuments were listed at the same location by the R processing, because the geolocation was obtained via the address, not the actual location of the monument. Thus, Tableau Public loses some of the data, not showing monuments that are located at the same spot and portraying them as one dot with asterisk symbol (“*”) instead of data. Only if you click “show the data” you can find out which monuments are listed there. The issue becomes critical, however, only in the case of Moskovsky Victory Park and Heroes Alley where monuments are multiple. In other cases the asterisk symbol replaces no more than 2-3 monuments at a time.

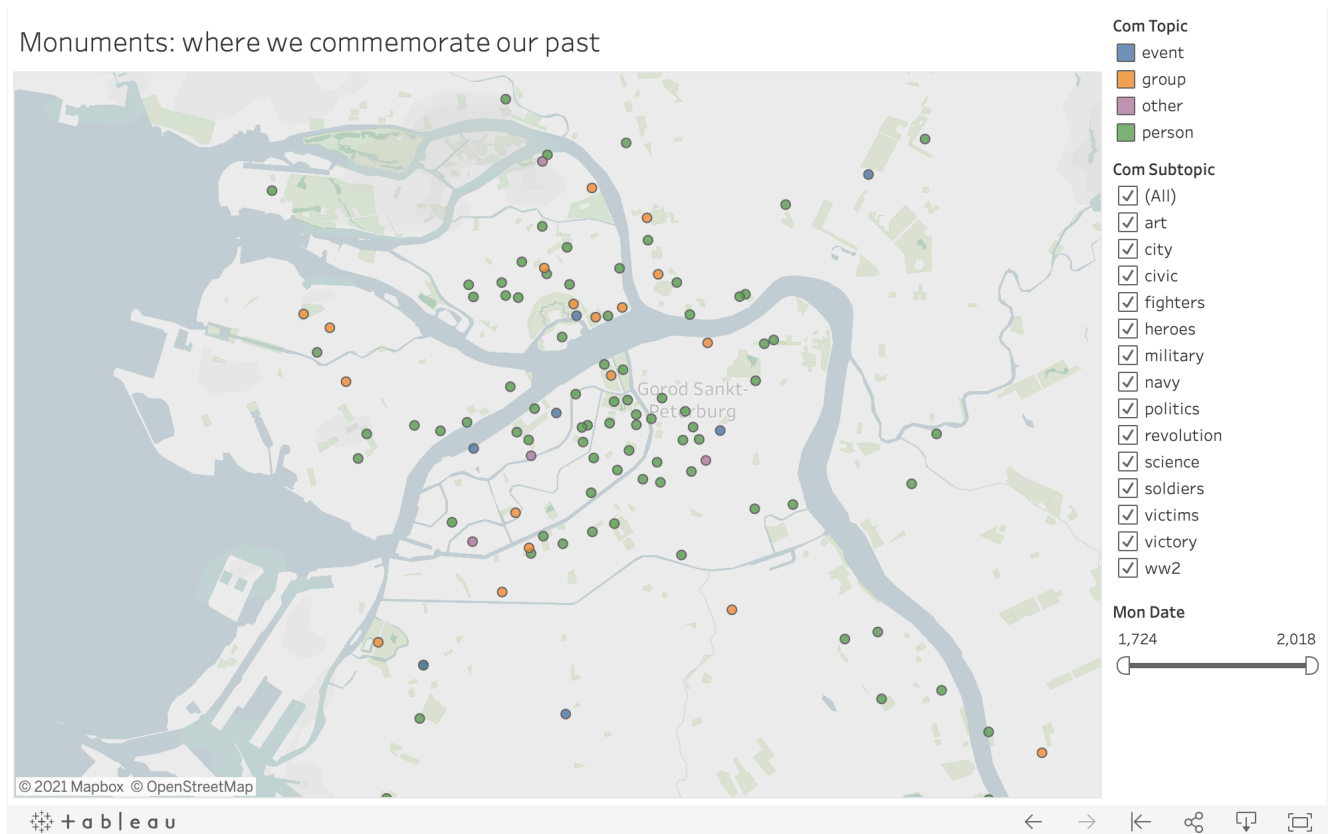


Image 3 — Interactive map prototype

⁷ Link: https://public.tableau.com/views/ThesisViz/Map?:language=en-GB&:retry=yes&:display_count=y&:origin=viz_share_link

The map primarily answers a question of where we commemorate our past. The visualisation helps us to connect the data we collected and processed with the geographical location of monuments we know. There are several things that we can see on the map and that can potentially be included into the discourse over monumental commemoration in the urban space.

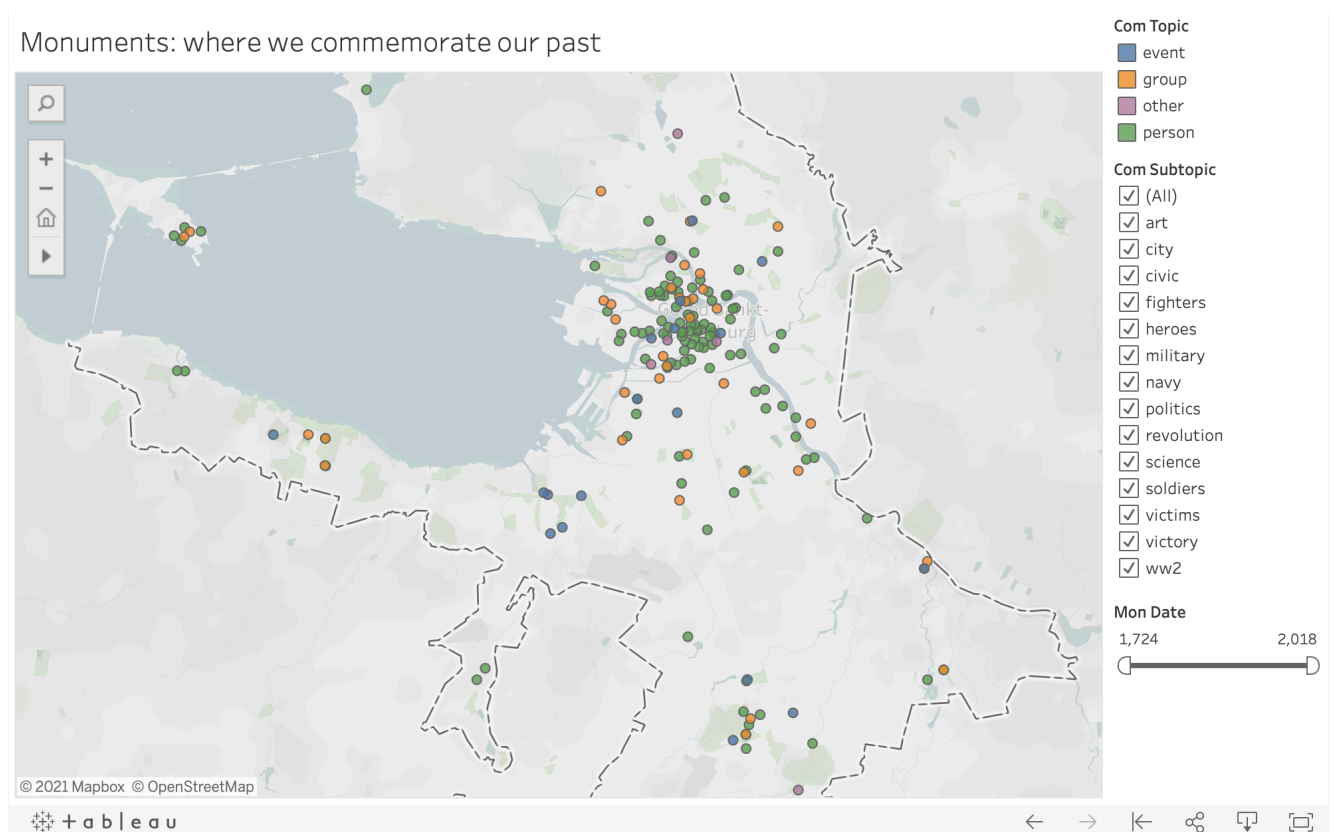


Image 4 — Overall picture

1. Spread of the monuments in the urban space.

As Image 4 clearly shows, monuments most of the time are tied to city centres. On the example of St. Petersburg we can not only see it in terms of the historical center, however it is also visible in the suburbs which were historically separate towns, but now belong to the St. Petersburg municipality, i.e. Pushkin, Kronshtadt, etc. Monuments were erected in places close to the majority of the group related to the commemoration. If we look closely at monuments in Kronstadt, for example, a navy city, which was

closed till 1996, all people, organisations and events commemorated there are tied with naval memory [38]. Pushkin, at the same time, being an emperor's residency in the 18th century, had a completely different local memorial stamp. Monuments there are primarily dedicated to the royal dynasty of Russia and people close to the family or highly valued by the emperor at the time. St. Petersburg center, however, being multilayered in terms of memorial tendencies cannot be called homogenous in this case. Moreover, we see that the further we go from the center, the more modern monuments there are. The space for commemoration grew slowly with the city.

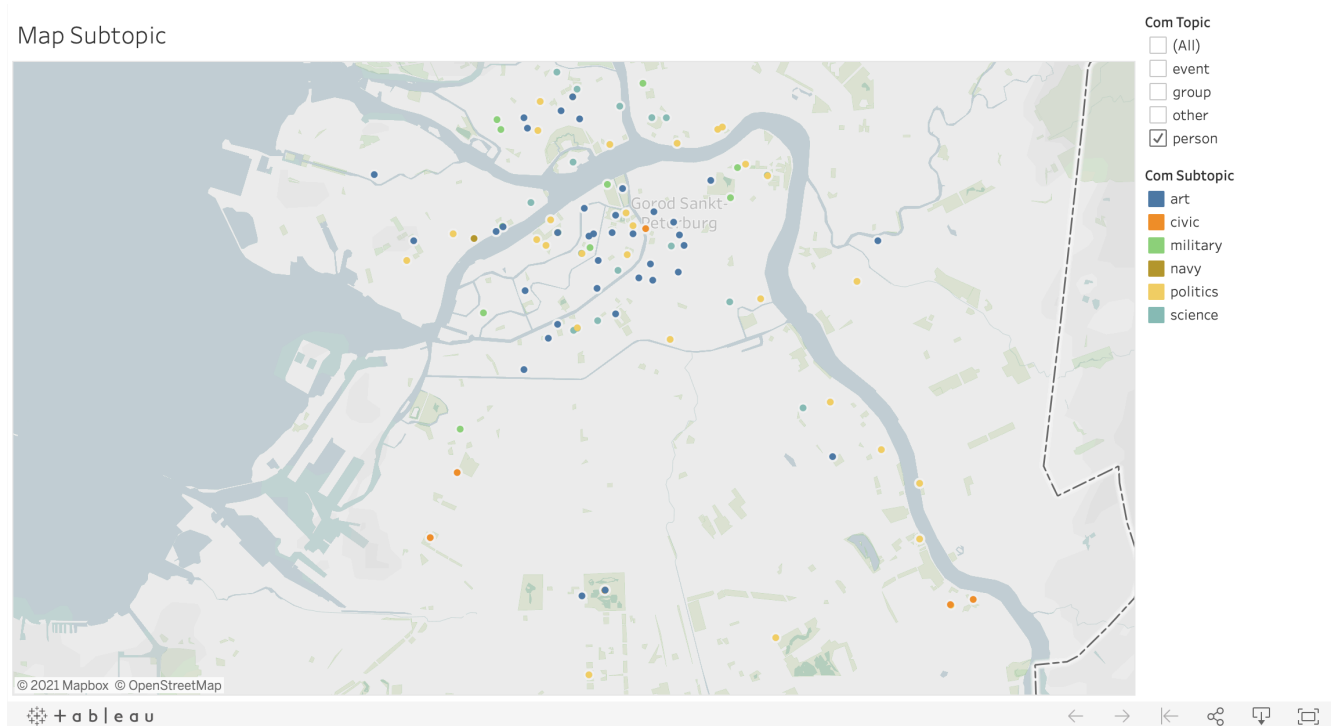


Image 5 — Subset by *person* category

2. Commemoration topic.

As Image 4 shows, there are specific tendencies in commemoration topics that we can find on the map of St. Petersburg monuments. For example, the *person* category is far more prevalent than any other category, meaning that mostly St. Petersburg landscape features monuments dedicated to people. If we look closely on this category, Image 5, we can find topics that are popular within the city monuments. As it was already mentioned, Kronstadt is popular for heroes of the navy. The center of the city, as we can

see, is occupied by monuments to artists of different kinds — writers, musicians, painters, etc. We cannot forget, however, about the mistake in visualisation. Some monuments are usually united into clusters, for example Moskovsky Victory Park would be primarily a military commemoration topic, but it is not displayed due to the coordinates issue. This visualisation is only partly representative.

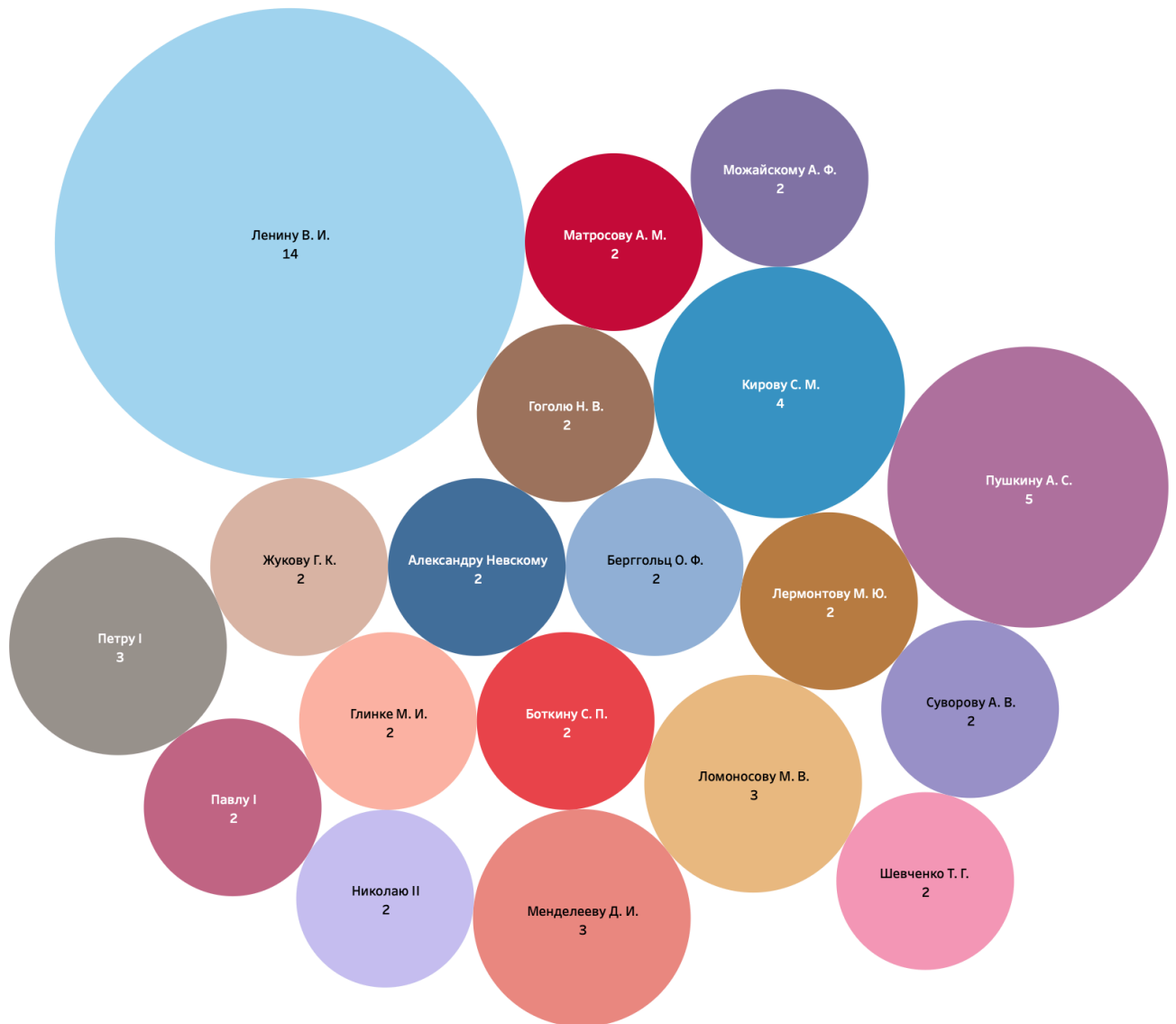


Image 6 — Name statistics

3. Repetitive monuments.

Browsing the map, we can find a tendency of repetitive monuments. If we look closely at the name statistics featured in memorials, we see the following picture (Image 6). The

filter is set to show only those who are commemorated more than once. Also, the filter is not set to show only category *person*, thus we can conclude that names of monuments dedicated to events, organisations and others do not repeat. The most popular person to be commemorated is Vladimir Lenin. However, we can see multiple examples of monuments being repeated twice. In several cases, for example, A. Suvorov, or N. Gogol, we see that monuments are separated by the almost 100 years gap. For others the gap is around 30 years or 20 years. In this example we can see that society established new monuments as old ones lose their relevance. Some of the monuments established later were dedicated to specific dates, for example O. Berggolts was commemorated the second time in the year of the 40th anniversary of her death, and N. Gogol was commemorated the second time in the year of the 45th anniversary of his death. The society seeks to renew the memorial context of the city, however it does not seek to destroy old symbols of commemoration as well. We duplicate the commemoration instead of interchanging the new one and the old one.

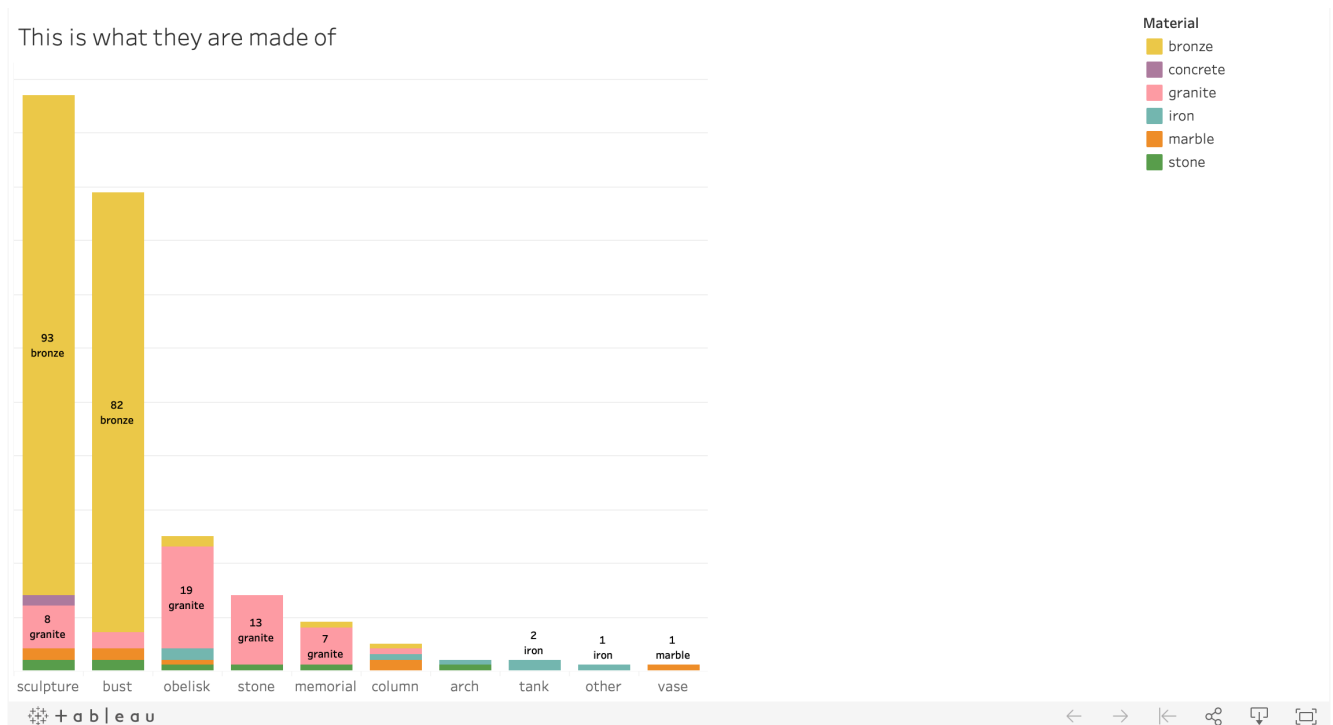


Image 7 — Materials and forms of monuments

4. General image of monuments in St. Petersburg

The map still lacks the visual representation of monuments in terms of how they look, and in the future pictures of memorials can be added to the project. However, now we can look at the statistics of monuments' appearance based on *type* and *material* dataset categories (Image 7). As we can see, bronze is the most popular material for the monuments in St. Petersburg, and types of memorials are usually sculpture or bust. The type's popularity is strictly connected and dictated by the personal monuments prevalence, sculptures and busts are used almost exclusively for personal memorials. Bronze was and still is widely used for casting sculptures and monuments, since the material is durable, not exposed to atmospheric influences and resistant to mechanical damage. It is also interesting to find popularity in granite as a material, however, expectedly it was used primarily for obelisks and memorial stones.



Image 8 — Interactive map for the public project

The map visualisation ends up showing multiple memorial tendencies in St. Petersburg which can and should be explored by the general public. The filters added to the interactive map allow people to control the perception of the data by themselves, thus making it fully accessible. However, for the sake of the project becoming more eye-

catching for the audience, the map was edited to be more explanatory. Monuments now contain not only statistical information, but also descriptive info about their history and the history of their meaning. The final interactive map is ready to be included in the prototype (Image 8). The color scheme was changed for the purpose of the project design, as well as the language was changed to Russian for the sake of the project being relevant in St. Petersburg primarily.

2.4 Timeline of monuments

While the map is extremely beneficial for the monuments' analysis, the timeline is also vital to add to the research. As it was stated before, not only the geographical context needs to be taken into account while studying monuments, but the context of time is indicative as well. The project contains two separate timelines: the first one is purely statistical and made with R code, it defines the whole picture of monuments construction in St. Petersburg. The visualisation code can be found in Appendix B. The second one is comparative and portrays the dependency of the year of construction and the year of meaning of monuments. The second timeline needed to be interactive, thus it was created in Tableau Public. The visualisation process can be found in Appendix C.

The timeline primarily answers a question of when we commemorate our past. The statistical timeline shows us when all of the existing monuments appeared and what their topic was. The interactive one shows us the dependency of establishment year and meaning year which brings insights into the process of commemoration in the city⁸. We will start with the analysis of the statistical visualisation.

⁸ Link to the interactive timeline: https://public.tableau.com/views/ThesisViz/Sheet5?:language=en-GB&:display_count=y&:origin=viz_share_link

1. Increasing number of monuments established.

As we can see on Image 9, the process of monument establishment significantly increased in the 20th century. If we look at the data on monuments established before the 1900s, we see the tendency of monuments being dedicated to a very limited circle of people. The tendency here is the same as the one we saw in Pushkin's monumental landscape (paragraph 2.3) and connected to the decision making bodies that take part in the monuments' establishment. Before the 20th century, only emperors were making decisions about who is supposed to be commemorated publicly. Monuments of that time are dedicated to emperors themselves, their family and people of great achievements like scientists, artists or military representatives.

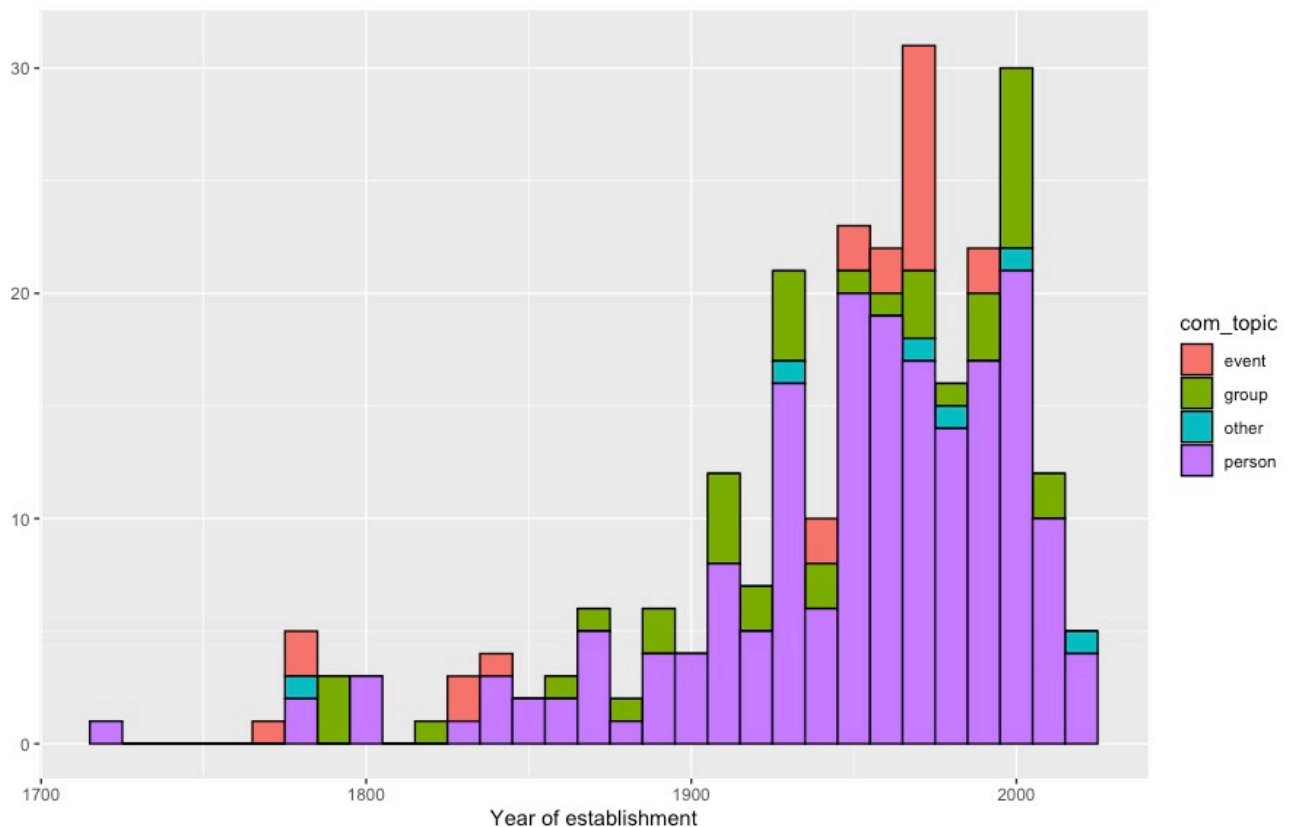


Image 9 — Timeline of monuments establishment

Also, victory arches can be found only in that time, after the 19th century arches were not established anymore. In the beginning of the 20th century the situation changed — first of all, major events happened, for example several wars and revolutions, where a

lot of people heroically died or played a huge role in the victory. There was no decision making body which was responsible for commemoration anymore, so people had the opportunity to establish monuments to their colleagues and heroes of their small group, for example, military regiment. After the Soviet power was fully established, monuments kept appearing in plenty, supposedly due to the regime needing to celebrate its victories and achievements. The situation was close to the emperor's era — people in power were commemorating scientists, artists, war veterans, etc. Also, the Soviet regime was constantly commemorating Vladimir Lenin as a symbol of a new system of power in the country. It almost did not matter who was in charge of the state, Lenin was always relevant to be commemorated. Also, the 20th century was richer in terms of scientific discoveries, inventions, artistic masterpieces, etc. Thus, more monuments needed to appear.

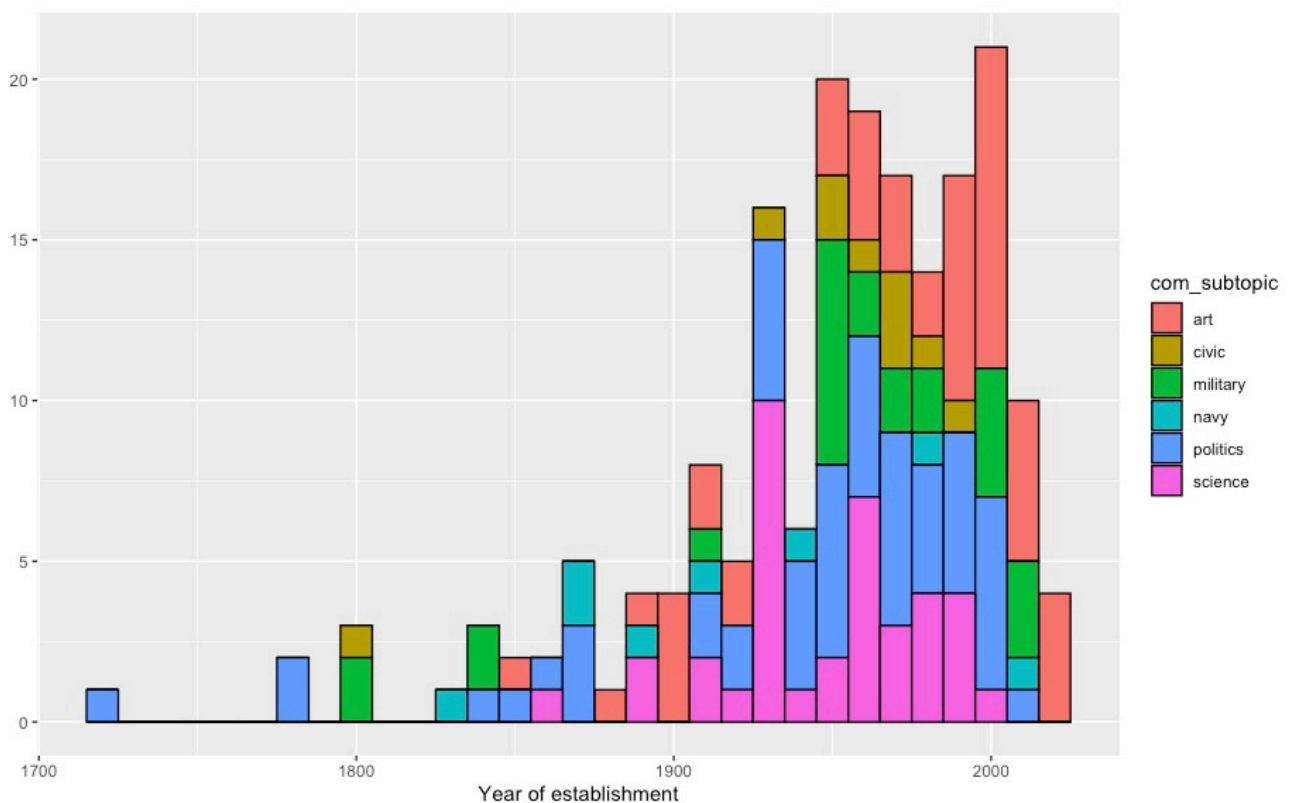


Image 10 — Timeline of the *person* subset

2. Personal monuments prevalence verification.

As Image 9 clearly shows, the personal monuments are indeed in a huge prevalence in comparison to other commemoration topics. This visualisation supports the conclusion about memorialisation of people in urban space made by the map. As the map visualisation was not fully representative due to coordinates issue, we have the opportunity to look closer at personal monuments topics in the timeline. We see on Image 10 how *military* groups in personal monuments significantly grew in the 20th century, which is connected to the events like World War I and World War II, as well as the Russian Revolution and other military conflicts. Also, we see a rise in *civic* commemoration, which in the 20th century meant to commemorate workers as well as people who participated in World War II as partisans or civilians. With World War II, everyone who cannot be classified as *military* or *navy* soldiers, as well as official politicians, were put in the category *civic*.

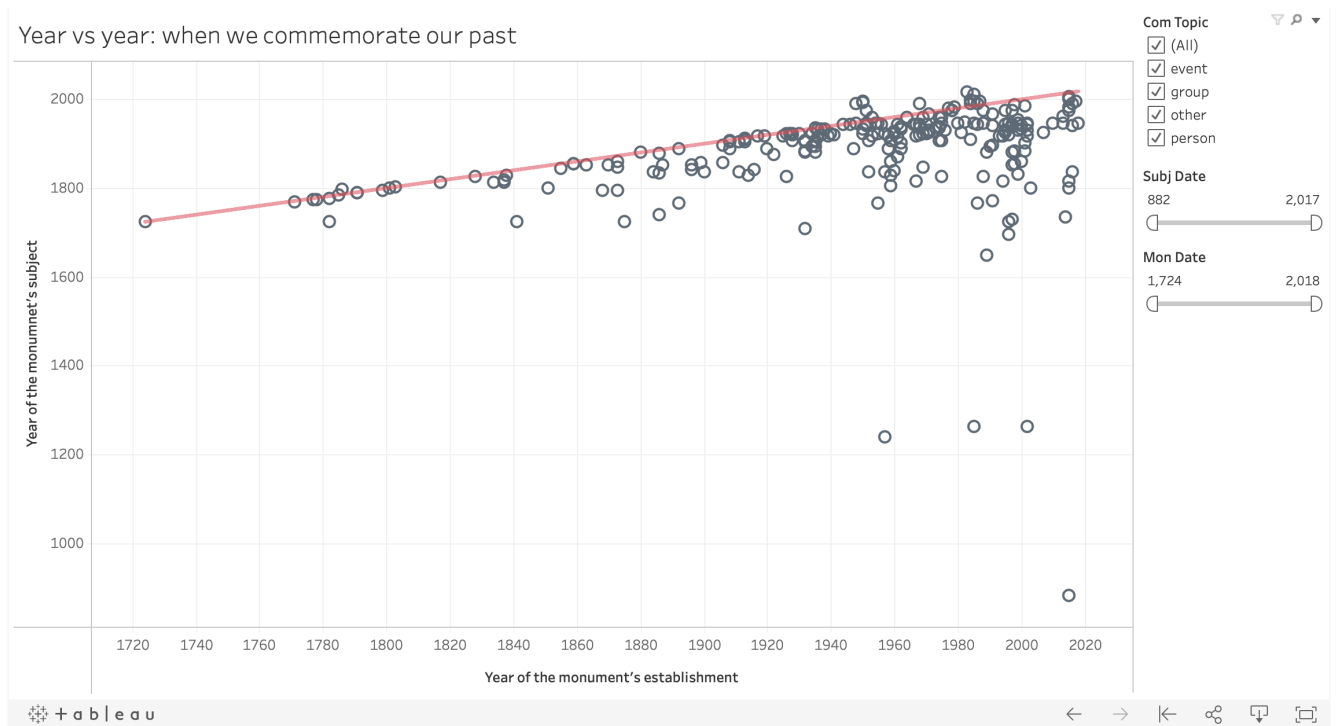


Image 11 — Raw comparative timeline

3. Anomalies in a monuments establishment timeline

One of the anomalies which can be observed in the dataset is years of establishment of some monuments, especially in *person* category. Logically, we can assume that the monument is established after a certain event happened. In the case of people, the assumption is that the tendency to commemorate people who have already passed away is more prevalent than any other. For this assumption to be verified, we created a comparative timeline of monuments establishment. The year of monuments' establishment was taken as an X-axis, and the year of monuments' meaning as an Y-axis. Image 11 shows a raw comparative timeline, which shows an interesting outlier in the far right bottom corner. This memorial is dedicated to the founders of Rus' — Rurik and Oleg. The event happened in 882, which is considered to be the beginning of Russian history. However, the memorial appeared only in 2015. Another three outliers are Aleksander Nevsky era monuments depicting either him or his achievements, like Nevsky battle in 1240. Events of the 13th century were commemorated only in the second half of the 20th century and early 2000s. Outliers are also interesting from a perspective of the city's memory. St. Petersburg did not exist in Aleksander Nevsky's

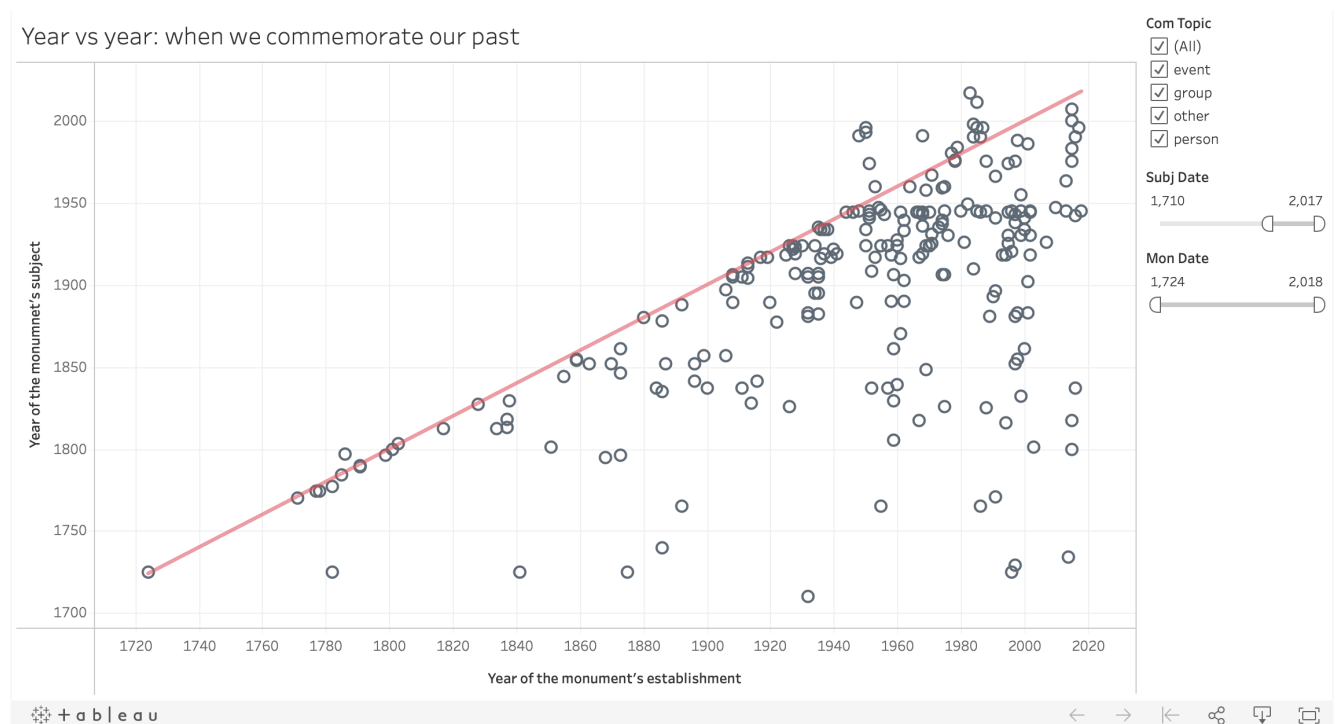


Image 12 — Comparative timeline, outliers cut

era and Rurik's era. However, them being a part of the collective memory of a nation made them a part of the urban memorial landscape as well. This is an illustrative case of a bigger level of collective memory being represented in comparison to a local memory.

For the timeline to be more representative, we narrow the subject date parameter to the existence of St. Petersburg — around 1703. The red line on the Image 12 becomes extremely valuable, it is a reference line which shows on the graph the equality of the year of subject to the year of establishment. The closer the monument to this line the closer the monument was established to the event. If the monument is located below the red line on the graph, it falls in the assumption of being installed after the event or person's death. However, if the monument is located above the red line, it shows that the monument was established before the event. Due to the fact that commemorating actual events before they happen is not possible, we can predict that all dots above the line are connected to people.

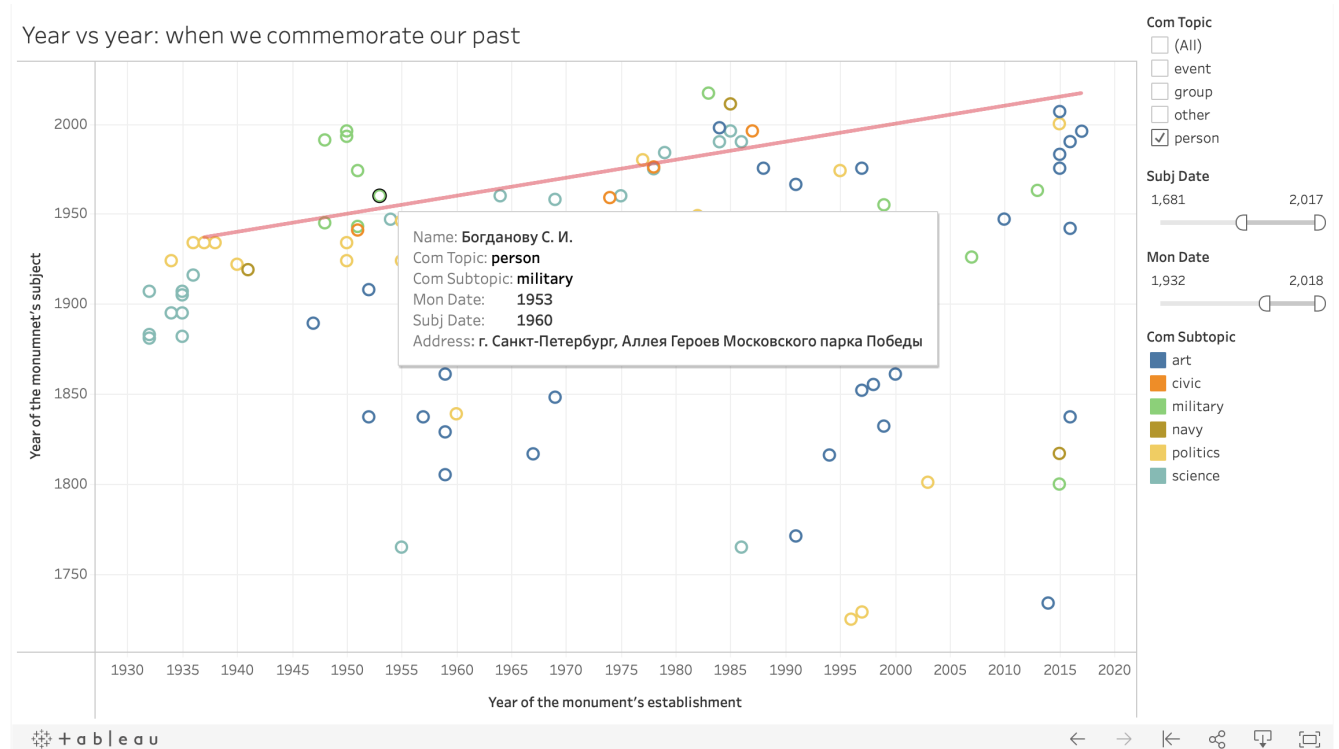


Image 13 — Timeline *person* subset

If we look closely and the personal monuments subset and apply it to the comparative timeline visualisation, we see the following picture (Image 13). Besides one exception, all monuments are located in one spot in the city — Moskovsky Victory Park. It started with commemoration of war heroes and then proceeded with Heroes of USSR commemoration, which is why people from categories of *politics*, *art* and *science* are represented [39]. The concept of Moskovsky Victory Park makes these outliers united and emphasises the exception even more. This means that the general rule for the city is commemorating people who passed away, however, there was made an exception in the form of a memorial park, for those who earned one of the highest awards from the government at a time [40].

Considering all mentioned above, the timeline shows us an important meta-analysis of the monuments' construction process in the city and the accepted rules of it. The general picture of the commemoration process in St. Petersburg depends on the round number of years passed from the event (anniversaries) and if the monument is dedicated to a person, it is a postmortem monument. However, not to overload the interactive map for the public project, it was decided to include the timeline in the deep mapping process. The timeline does not explain itself enough without supporting research analysis, which means that it cannot be pasted to the small window of monument data without extensive explanation. It was decided to add a timeline as a supporting section of analysis to the public project in a way of sharing not only the interactive map which can be used by the general public, but also some insights obtained from the research with corresponding visualisations for people who might get interested in studying the issue afterwards.

2.5 Project prototype

The main goal of the project on St. Petersburg monuments is to find a way to the local society⁹. Thus, it is important to turn the research into a public resource open for usage. The prototype called “MemoMap” was created in a form of a Tilda website and presented in the end of February 2021 for the first time¹⁰ (Image 14) [41]. The resource contains three main sections: the interactive map prototype, the research description, and the additional entertaining extension of the project in the form of touristic routes and thematic selections. Full website screenshots are attached in the Appendix D.

The map is fully interactive and updates itself when the dataset is updated. The tooltip of each monument shows the name of the memorial, its history and the history it tells. Monuments are colour-coded by the parameter *com_topic* and separate personal monuments, monuments to events, group monuments and other. The map allows access



Image 14 — MemoMap project prototype

⁹ GitHub link: <https://github.com/EseniiaNovo/MemoMap>

¹⁰ Link: <http://memomap.tilda.ws>

to the full data on the selected memorial, so the address and years information are easily found, the map was made as a sketch for the data not to overload the whole picture.

ИССЛЕДОВАНИЕ

Памятники Санкт-Петербурга: создание карты исторической памяти города

Исследование памятников Санкт-Петербурга началось с интереса к исторической памяти в целом. В 2017 году я заинтересовалась происходившими тогда в США протестами против монументов Конфедерации, мой бакалаврский диплом был посвящен тому как СМИ рассказывали об этой проблеме. В 2019 году я проводила исследование по актуальности памятника "Neue Wache" в Берлине, которое было поддержано грантов Центра изучения Германии и Европы (СПбГУ - Университет Билефельда). Пройдя большой крюк в изучении исторической памяти зарубежных стран, я обратила внимание на родной город - Санкт-Петербург.



Есения Новохатская
Автор проекта

Наблюдения за тем, как общество по всему миру начинает сомневаться в вечности памяти, которую представляют памятники, показали, что невнимательность к значению мемориалов пропорциональна силе открытого конфликта в дальнейшем. В связи с этим, полное молчание общества или слабо ведущиеся дискуссии в России побудили меня начать изучать местные памятники - молчим ли мы из-за их "безобидности" или не хотим замечать?

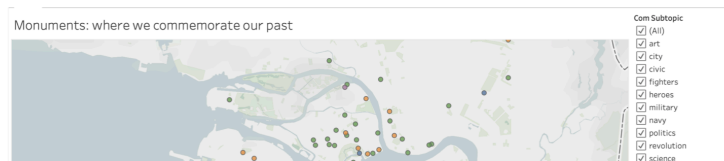


Image 15 — Research description section

The research description contains the summary of the study and all visualisations listed in this paper (Image 15). The description is translated to Russian to be accessible for the local community in St. Petersburg. The touristic routes and selections section contain only propositions and currently do not have prepared content. The propositions of routes and selections are listed as suggestions for now, and people can create these monuments collections by themselves.

The potential future development of the project is connected to three main ways of improvement: the database, the map, the representation. First and foremost, it is important to note the dataset problems. The dataset structure is overloaded which leads

to a vague understanding of the concept of the project from the data. The following database model was presented as a potential solution (Image 16).



Image 16 — Database model

The database solves the problem of collected data being more self-explanatory, and can show the concept of the project visually. We clearly put the memory site in the center (being the monument itself) and look at it from two different perspectives - as an object (monument), and as a subject (person/event). The parameters primarily connected to the monument as an object in the database (such as *type* or *material* parameters) will be located accordingly on the “object” side. Accordingly, parameters primarily connected to the subject of a monument (such as commemoration topic and subtopic) will be located on the “subject” side.

The database structure also allows adding missing data and potentially making the process of data contribution open to the general public. The data still improved due to the initial governmental data resource being incomplete. One of the potential solutions

Расскажите нам о памятнике

Если вы обнаружили ошибку в данных на сайте проекта МемоМар или нашли недостающий памятник в Санкт-Петербурге, сообщите нам. Также, пожалуйста, включите в раздел "описание" ссылку на ресурс данных.

*** Обязательно**

E-mail: *
 Чтобы мы связались с Вами в целях получения недостающей информации, если она будет.

Мой ответ

Название памятника *

Мой ответ

Описание *
 Укажите, пожалуйста, ошибку в данных или недостающие данные

Мой ответ

Согласие на обработку полученных данных и использование предоставленной информации для нужд проекта МемоМар *

☐ Соглашаюсь

Отправить

Image 17 — Google form for additional data collection

would be to parse additional data. However, it will lead to even more manual work due to metadata being accessible only this way.

The solution for the project is an open source method — allow people to submit data on monuments they know about (Image 17). It solves two issues at once: this method will allow us to receive data in a format closer to needed, and it will drive people to the topic thus contributing to the popularisation side of the project. The complications of this solution is the process of fact checking — first of all, it is important to compare the contributed data to the existing one in the dataset to avoid duplications. Second of all, it is vital to check the correctness of the data — geolocation and dates can be checked via code, however the metadata should be checked manually. One of the potential ways to make the checking process easier is to request the reference source with the data itself, especially for the metadata.

The map development is connected to the improvement of the data representation and potential need in search for a better visualisation tool. Currently, the Tableau Public version of the map cannot fit the whole range of metadata needed to be presented for the purpose of the project. Also, the description of monuments' history and their meaning needs to be more elaborated which will lead to bigger text. Thus, possibly, the map needs to have inner subpages with monuments' history. It will be possible to add pictures as well to subpages, making the project more accessible.

Finally, the representation development is connected to the website and to the perception of the information. For this stage, several additional studies need to be completed. Firstly, the prototype should be tested on focus-groups or via questionnaire about the platform usage. Secondly, the results need to be applied to the prototype development. Besides the society's response to the project, it is also important to adapt more developed tools and create more elaborated websites.

CONCLUSION

The 21st century proved to be the era of rethinking society's perception of the past. Multiple countries face monuments destruction issues and general memorial conflicts, and most of the time the community does not know how to construct a productive discussion. The right response to this era is preventive — to start the discussion over historical memory before the conflict arises.

Considering the specifics of the modern era, especially the level of virtual communication within the community, it is important for the discussion to become digital as well, due to the necessity of being accessible to as many people as possible. Thus, any materials which are supposed to help society to come to an agreement have to be digital as well. This means that any project related to historical memory representation in the present times needs to be fully digital or have digital options.

The collection of monuments dataset and the visualisations realisation showed a huge potential behind the concept of the MemoMap project. It combines all necessary arguments for people to discuss their historical heritage and come to a unanimous decision if it is needed. The variety of data combined in the project allows not only the general public to be heard but also some grounded unpopular opinions having the possibility to speak up about their vision of monuments' future.

The future of the project, described in paragraph 2.5, shows all the necessary future steps for the source to develop into a bigger and fully accessible one. Depending on the questionnaire and societal response to the prototype, the concept can be changed, however the general idea supposedly will be effective, based on the theoretical background and multiple examples of similar projects in a sphere of digital humanities and beyond.

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APPENDIX A. DATA CLEANING IN R

```

mon_okn <- read.csv("~/ОКН на тер. СПб.csv")
for (rows in 1:length(mon_okn[, "name_object"])) {
  if (startsWith(mon_okn[rows, "name_object"], "Бюст")) {
    mon_okn[rows, "type"] <- c("Памятник")
  } else if (startsWith(mon_okn[rows, "name_object"],
"Памятник")) {
    mon_okn[rows, "type"] <- c("Памятник")
  } else if (startsWith(mon_okn[rows, "name_object"],
"Мемориал")) {
    mon_okn[rows, "type"] <- c("Памятник")
  } else if (startsWith(mon_okn[rows, "name_object"], "Камень"))
{
  mon_okn[rows, "type"] <- c("Памятник")
} else if (startsWith(mon_okn[rows, "name_object"], "Стела"))
{
  mon_okn[rows, "type"] <- c("Памятник")
  } else if (startsWith(mon_okn[rows, "name_object"],
"Обелиск")) {
    mon_okn[rows, "type"] <- c("Памятник")
  }
}
mon_okn <- mon_okn[!is.na(mon_okn$type), ]
mon_okn <- mon_okn[c("name_object", "date", "address",
"author")]
names(mon_okn)[1] <- "name"
names(mon_okn)[4] <- "description"

```

```

mon_dost <- read.csv("~/Достопримечательности.csv")
mon_dost <- mon_dost[mon_dost$obj_type == "Памятники", ]
mon_dost <- mon_dost[c("name", "address_manual", "description",
"obj_history")]
names(mon_dost)[2] <- "address"

mon_add <- read.csv("~/Объектно адресная система.csv")
mon_add <- mon_add[mon_add$appellation == "Памятник", ]
mon_add <- mon_add[c("appellation", "address")]
names(mon_add)[1] <- "name"

#Uniting datasets into one
library(dplyr)
mon <- full_join(mon_okn, mon_add)
mon <- full_join(mon, mon_dost)
mon <- mon %>% mutate_all(na_if,"")

#Parsing geolocation data via google API
library(ggmap)
register_google(key = "~")
mon_fin <- mon
for(i in 1:nrow(mon_fin))
{
  result <- geocode(mon_fin$address[i], output = "latlona",
source = "google")
  mon_fin$lon[i] <- as.numeric(result[1])
  mon_fin$lat[i] <- as.numeric(result[2])
}
write.csv(mon_fin, "~/Памятники СПб.csv", row.names = FALSE)

```

APPENDIX B. DATA VISUALISATION IN R

```
library (ggplot2)
```

```
library (dplyr)
```

```
monuments <- read.csv ("~/Памятники СПб.csv")
```

```
ggplot(monuments, aes(mon_date)) + geom_histogram(binwidth =
10, color = 'black', aes(fill = com_topic)) + labs (x = 'Year
of establishment', y = '')
```

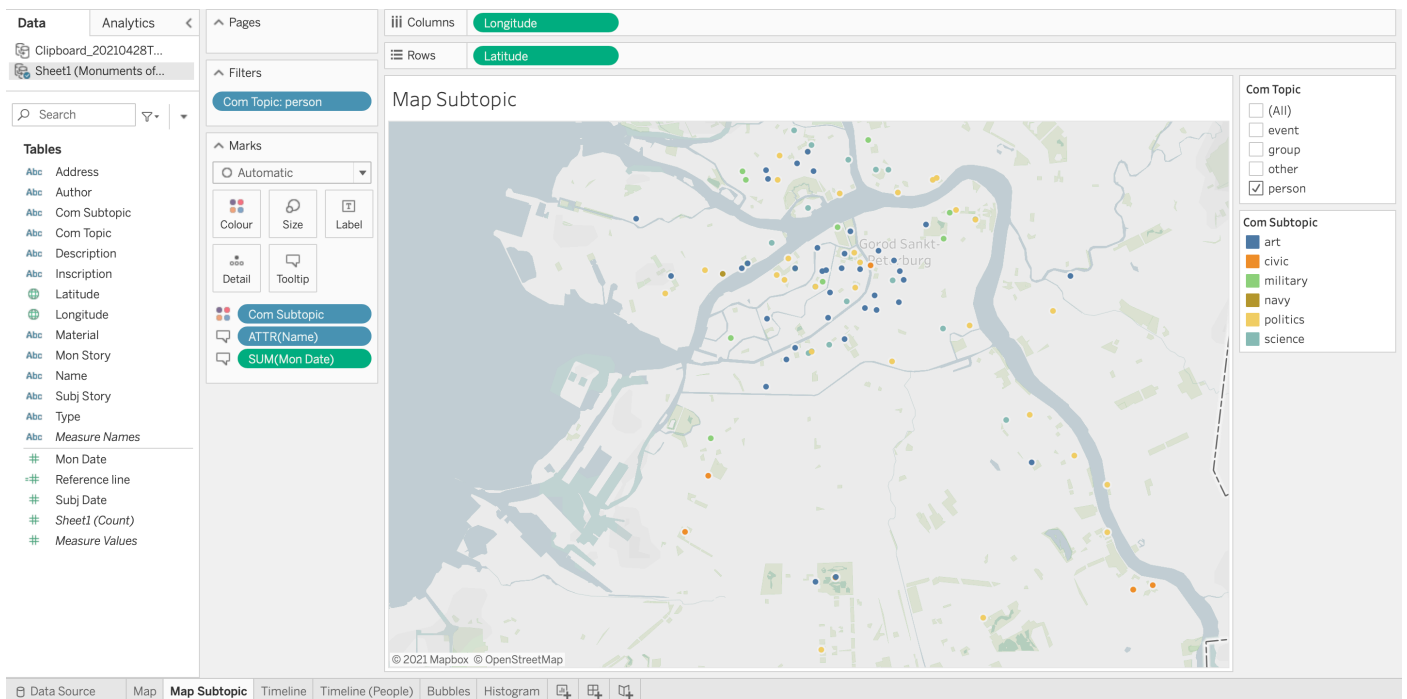
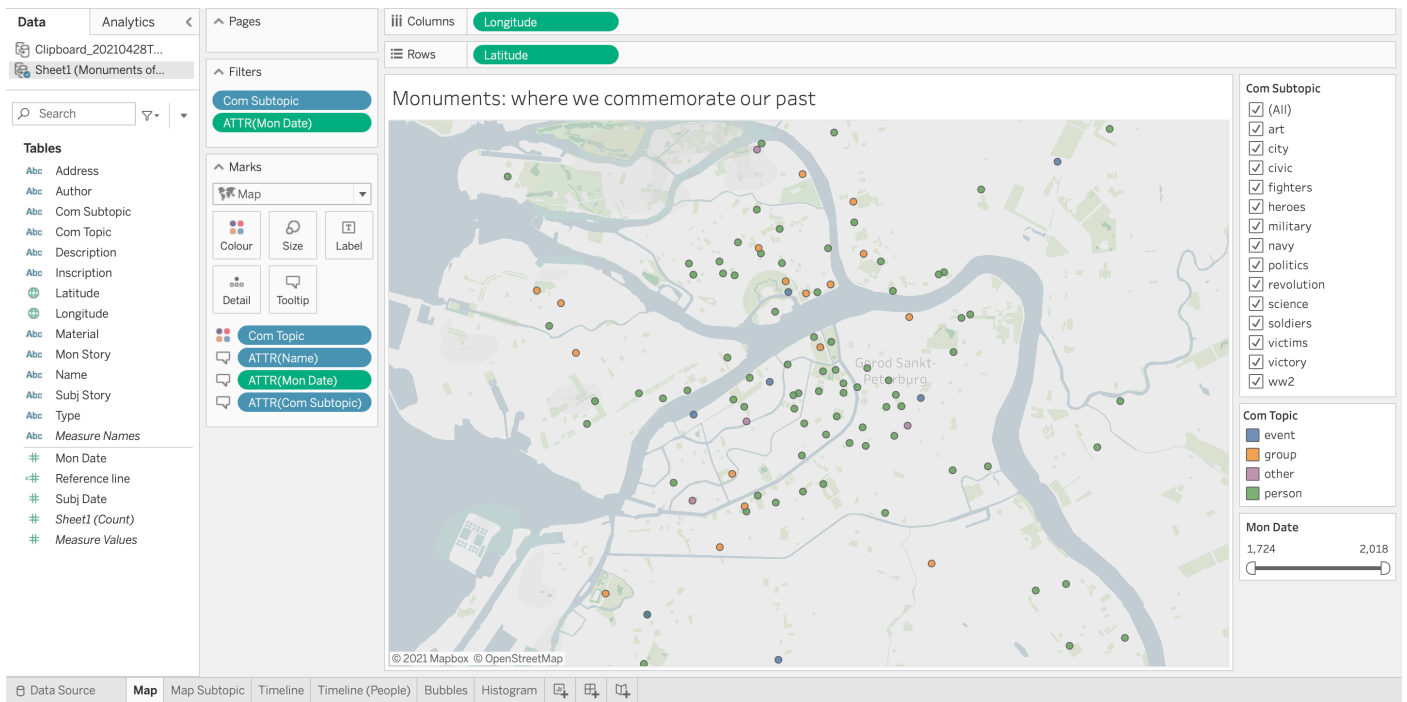
```
ggplot(filter(monuments, com_topic == 'person'), aes(mon_date))
+ geom_histogram(binwidth = 10, color = 'black', aes(fill =
com_subtopic)) + labs (x = 'Year of establishment', y = '')
```

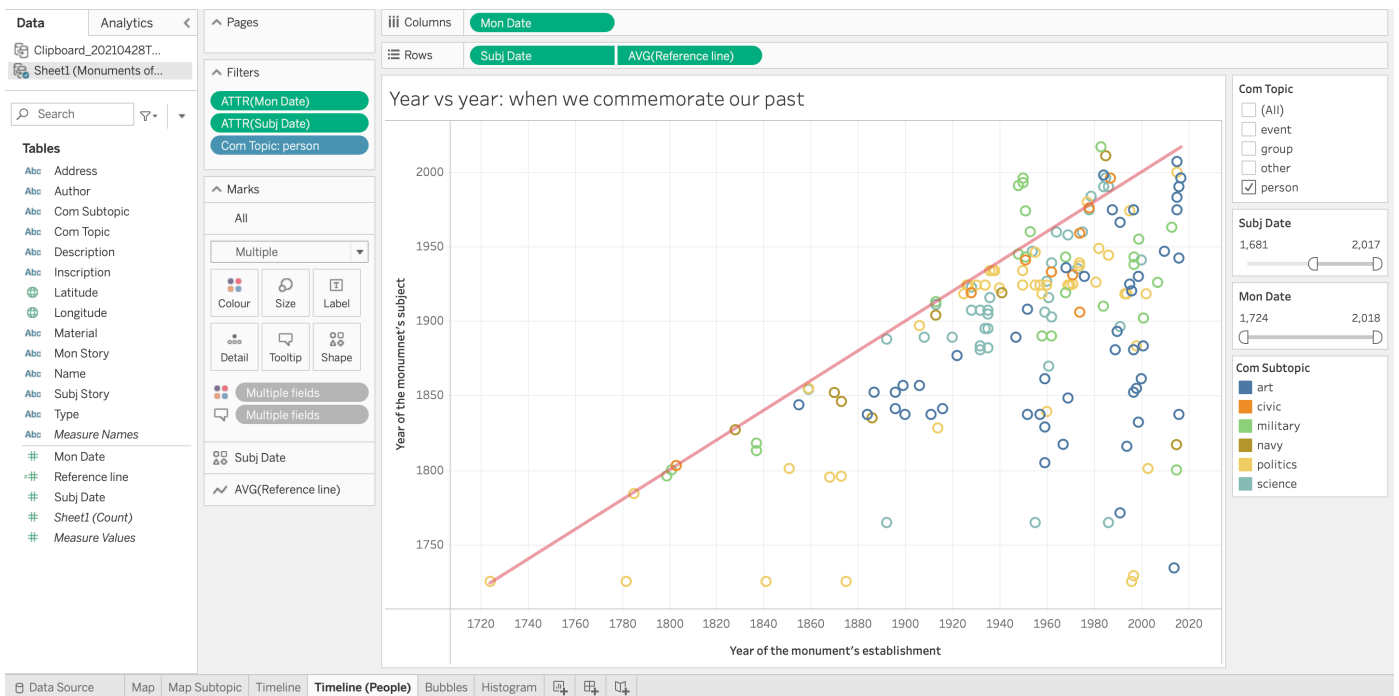
#Visualisation later turned to interactive in Tableau Public

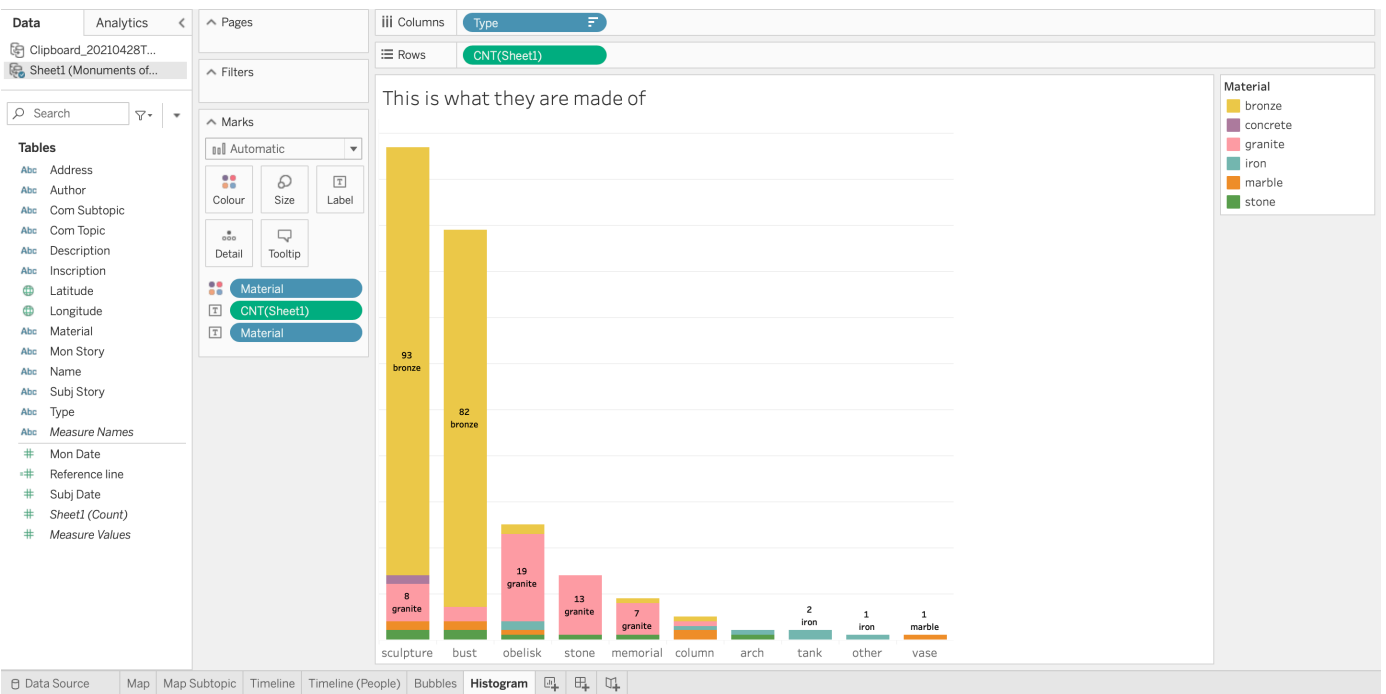
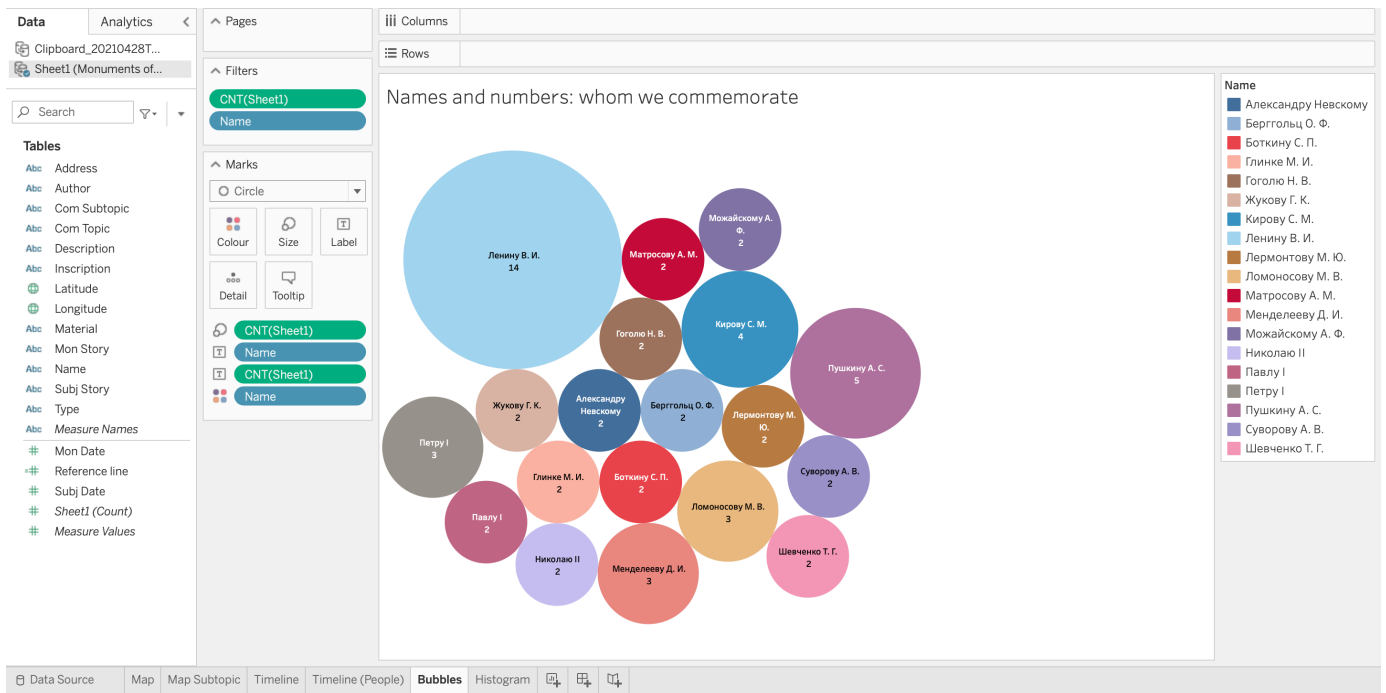
```
ggplot(filter(monuments, subj_date >= 1600, mon_date >=1600),
aes(x = mon_date, y = subj_date)) + geom_point() + theme_bw() +
labs (x = 'Year of establishment', y = 'Year of meaning')
```

```
ggplot(filter(monuments, com_topic == 'person', subj_date >=
1600, mon_date >=1600), aes(mon_date, subj_date)) +
geom_point() + facet_wrap(vars(com_subtopic)) + theme_bw() +
labs (x = 'Year of establishment', y = 'Year of meaning')
```

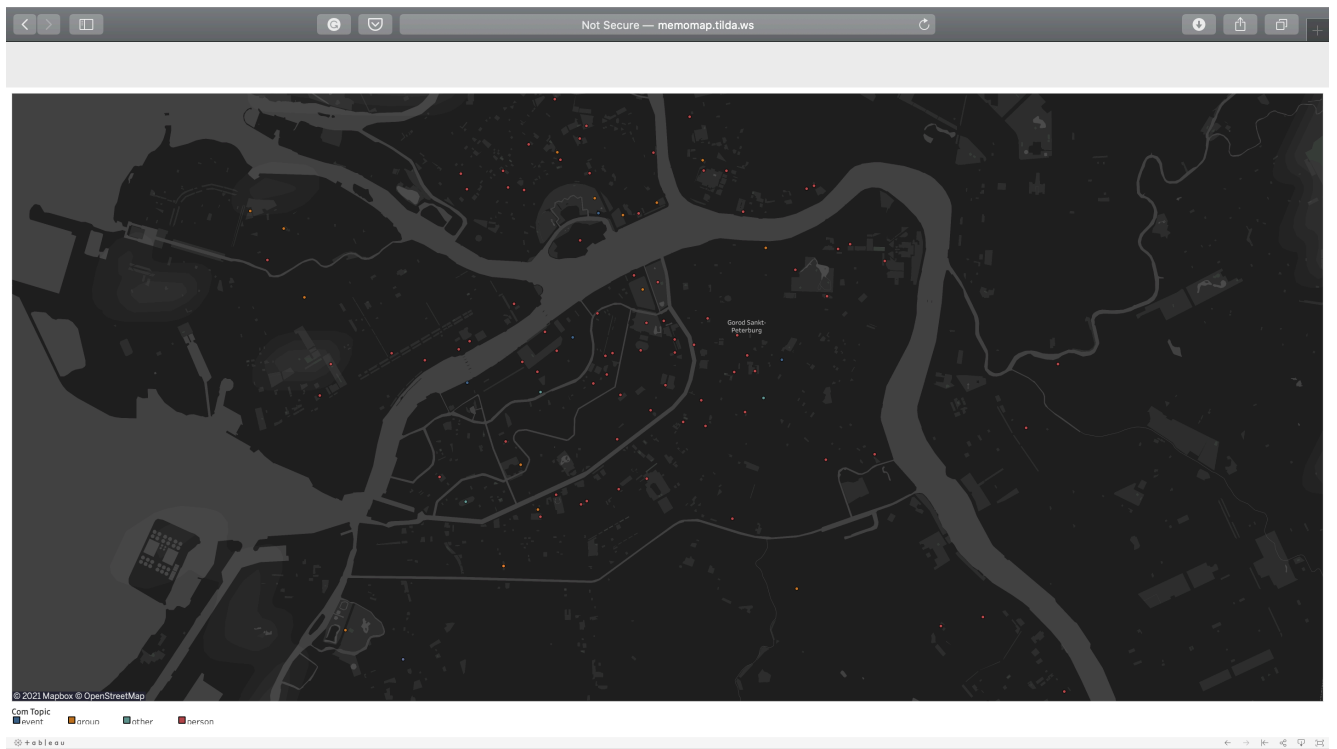
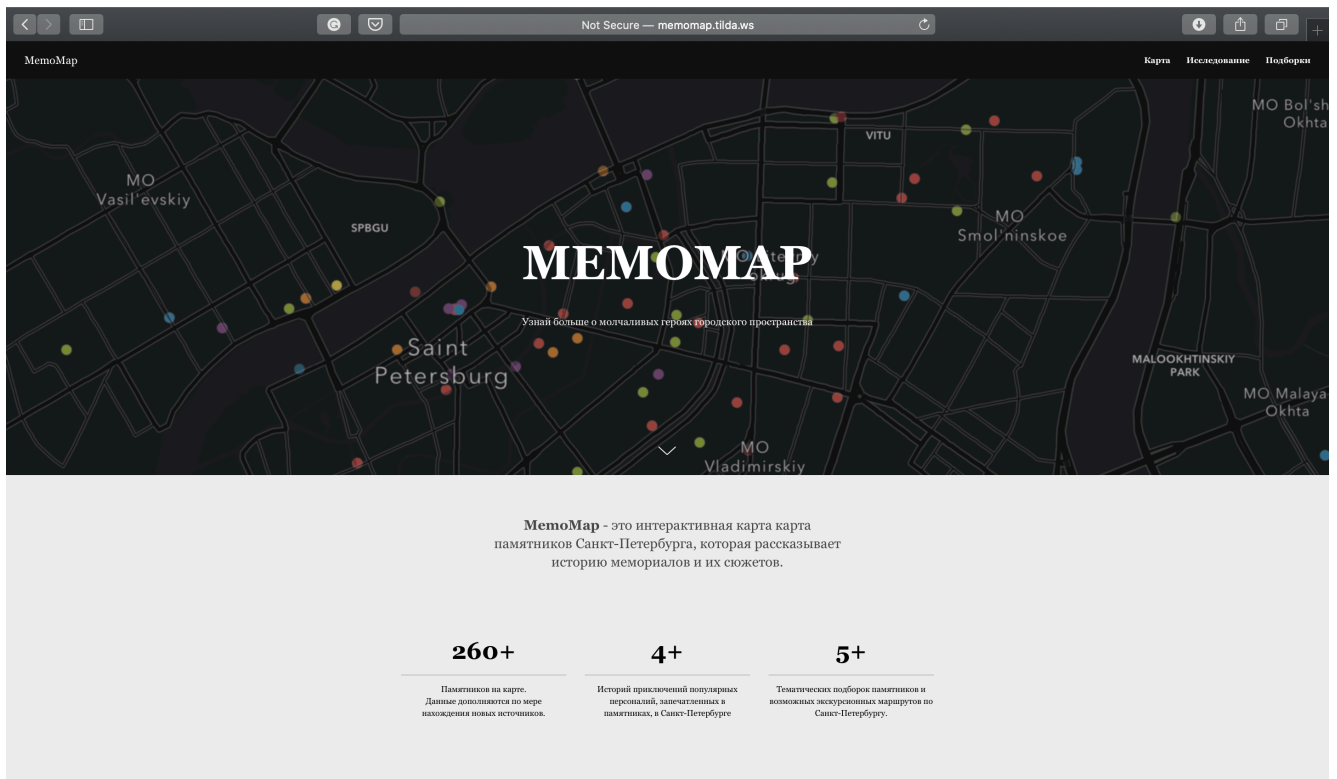
APPENDIX C. DATA VISUALISATION IN TABLEAU PUBLIC

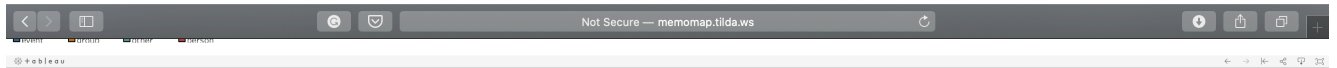






APPENDIX D. PROTOTYPE WEBSITE ON TILDA





Важное о проекте "МемоМар"



В чем состоит цель проекта?

Цель проекта главным образом состоит в привлечении внимания общества к историческим памятникам. Мемориалы постепенно теряют исторический контекст и сливаются с урбанистическим ландшафтом. Проект ставит своей задачей изменить "слепое" отношение к памятникам и вдохновляет жителей Петербурга и гостей города изучать истории, которые рассказывают мемориалы.



Какие памятники отобраны для проекта? По какому принципу?

Для проекта в первую очередь отобраны исторические памятники - мемориалы, которые посвящены конкретному человеку или историческому событию. В дальнейшем, проект будет дополнен городской скульптурой, которая также обильно представлена в Петербурге, но пока не является частью проекта.

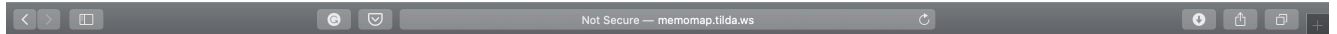


Подборки и маршруты: как ими пользоваться?

В первую очередь, проект предоставляет доступ к карте памятников, на которой мемориалы разбиты по категориям. В дальнейшем, сформированные маршруты будут представлены на сайте, пока что пользователи могут самостоятельно выбрать тему, которая им интересна, и посетить ряд памятников из этой категории, прогуливаясь по городу и получив точные координаты местонахождения мемориалов.

Проект "МемоМар"

Проект реализован при поддержке Международного центра цифровых гуманитарных исследований Университета ИТМО в рамках магистерской



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Проект реализован при поддержке Международного центра цифровых гуманитарных исследований Университета ИТМО в рамках магистерской диссертации "Памятники Санкт-Петербурга: создание карты исторической памяти города / Studies on St. Petersburg monuments: mapping historical memory", а также при поддержке Комитета по науке и высшей школе Правительства Санкт-Петербурга.

Проект основан на [Открытых данных Санкт-Петербурга](#), а также на данных с ресурса [OpenStamps Санкт-Петербурга](#). Несмотря на проработанный датасет, который лежит в основе визуализации и интерактивной карты, все еще возможны недочеты с точки зрения упущенных данных. Если вы не нашли памятник, о котором вам достоверно известно, пожалуйста, сообщите нам. Мы проверим полученные данные и внесем их в датасет. Также, если вы обнаружили неточность в данных на карте, пожалуйста, сообщите нам через ту же форму.

Рассказать о памятнике в Петербурге

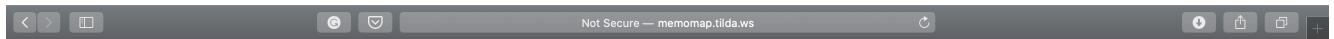
ИССЛЕДОВАНИЕ

Памятники Санкт-Петербурга: создание карты исторической памяти города

Исследование памятников Санкт-Петербурга началось с интереса к исторической памяти в целом. В 2017 году я заинтересовалась происходившими тогда в США протестами против монументов Конфедерации, мой бакалаврский диплом был посвящен тому как СМИ рассказывали об этой проблеме. В 2019 году я проводила исследование по актуальности памятника "Neue Wasche" в Берлине, которое было поддержано грантом Центра изучения Германии и



Евгения Новохаченко
Автор проекта



ИССЛЕДОВАНИЕ

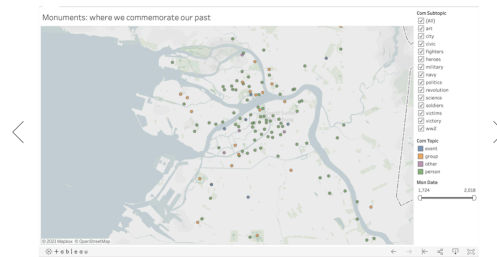
Памятники Санкт-Петербурга: создание карты исторической памяти города

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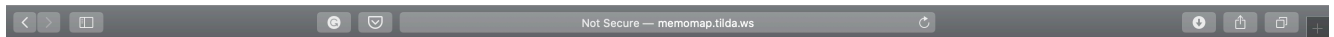


Есения
Новикова
Автор
проекта

Наблюдения за тем, как общество по всему миру начинает сомневаться в вечности памяти, которую представляют памятники, показали, что невидимость к значению мемориалов пропорциональна силе открытого конфликта в дальнейшем. В связи с этим, полное молчание общества или слабо ведущиеся дискуссии в России побудили меня начать изучать местные памятники - молчим ли мы из-за их "безобидности" или не хотим замечать?



Исследование все еще ведется и будет окончено летом 2021 года и представлено



Исследование все еще ведется и будет окончено летом 2021 года и представлено в виде магистерской диссертации. Некоторые из ключевых для исследования визуализаций можно увидеть выше. В своем исследовании я обращаю внимание на время установок памятника, на то, как часто какой-либо человек или событие запечатлен в виде мемориала в городском пространстве, а также на технические детали, такие как материал памятника и его форма. Все это суммарно помогает составить некоторый коммеморативный паттерн города, в последствие опираясь на него можно говорить о "проблемности" или "непроблемности" памятников в Санкт-Петербурге.

МАРШРУТЫ И ПОДБОРКИ

Кто они - памятники?

Будучи полноправными участниками туристических маршрутов, мемориалы часто становятся помощниками исторического сторителлинга в городском пространстве. Однако, проект ставит своей целью сфокусироваться в первую очередь на памятниках как таковых, поэтому предлагает подборки и маршруты, посвященные исключительно местам памяти в Санкт-Петербурге.

Темы подборок, находящихся в разработке:

1. Памятники, посвященные Великой отечественной войне (с категоризацией на памятники героям и жертвам);
2. Литературный Петербург: памятники писателям и поэтам
3. Императорский Петербург: памятники императорам России
4. Россия до Петербурга: памятники событиям и персоналиям, которых Петербург не видел
5. Памятники, спроектированные одним скульптором (несколько подборок по авторам)

