# Saint-Petersburg Skater's Map

#### Introduction

Nowadays, people pay a lot of their attention to their health and sport. One of the most popular activities is skating. In Saint-Petersburg many people use their skates like a kind of transport and just for fun, but there is a problem when you want skating on the streets - bad conditions of our roads.

The main goal of my project is to create a map, which will automatically generate the most suitable routes for skating (excluding bad or repaired roads and having regards to skaters experiences).

<u>Values/benefits</u>: I think, it will be a kind of social project for people, who likes skating, to help them with finding the most suitable route. They will not spend their time, trying to find the way among our streets. They will not be injured because of the holes and hillocks. In plans there's also to add the locations of special shops with skating goods and skatingparks. It

will be good for both sides. People will catch the information about shops, and shops will have more clients.

## **List of Features**

#### - Registration

All skaters can register on the site, to have more possibilities on the web-site and to become a part of the project.

-Users will have the possibilities to add their routes and information about roads condition People, who always skating on the streets have the most actual information about road condition. Users of the map will receive points for their information and users with the most amount of points will join to the team of administrators.

### -Automatically generated routes

The logic of map will analyze the given information and generate the route for the user, excluding bad roads and having regards to his or her experience. For example, if he is a beginner, the map will exclude the bridges or high hills on his way (if it is possible).

## -Special layers with location of shops and skatingparks

Users will have a possibility to choose the layers with location of shops and skatingparks in Saint-Petersburg.

## **Market Survey**

#### 1. GoogleMaps

In GoogleMaps there is a function to show the repaired roads and traffic jams. I want to use the same idea in showing bad road condition at the map.

## 2. OpenStreetMap

It is a kind of map, which is accessible for people. It also has tracks and can be used by skaters.

#### 3. GPSies

An application, where you can choose tracks for different kinds of activity, skating among them. There people also can added their own routes.

#### 4. Inline Map

The idea of this site is the closest to my idea of the map. It is the web-site with possibilities for users to add their routes for skating and choose the level of the route(for beginners, fast and etc.), but there is no information about road condition.

## 5. SwitzerlandMobility

Beautiful website with routes for skaters with information about it's length and fitness level, but there is no possibility to add your own route.

#### References

#### **MATERIALS:**

- <a href="https://www.oreilly.com/library/view/graph-algorithms/9781492047674/ch04.html">https://www.oreilly.com/library/view/graph-algorithms/9781492047674/ch04.html</a>
  -Pathfinding and Graph Search Algorithms for generating the routes
- <a href="https://developers.google.com/maps/documentation">https://developers.google.com/maps/documentation</a> Google Maps Platform Documentation
- <a href="https://wiki.openstreetmap.org/wiki/RU">https://wiki.openstreetmap.org/wiki/RU</a> OpenStreetMap Guide
- <a href="https://maphub.net/explore">https://maphub.net/explore</a> MapHub Create interactive maps
- <a href="https://whitefuse.com/blog/how-get-interactive-map-your-website">https://whitefuse.com/blog/how-get-interactive-map-your-website</a> White Fuse Create an interactive map for your website

#### **WEBSITES:**

- <u>www.google.com/maps</u> GoogleMaps
- www.openstreetmap.org OpenStreetMap
- <u>m.gpsies.com/home.do</u> GPSies
- <a href="http://www.inlinemap.net">http://www.inlinemap.net</a> Inline Map
- www.schweizmobil.ch/en/skating-in-switzerland.html SwitzerlandMobility