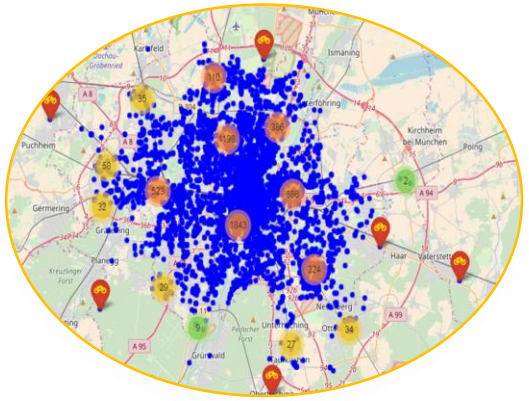
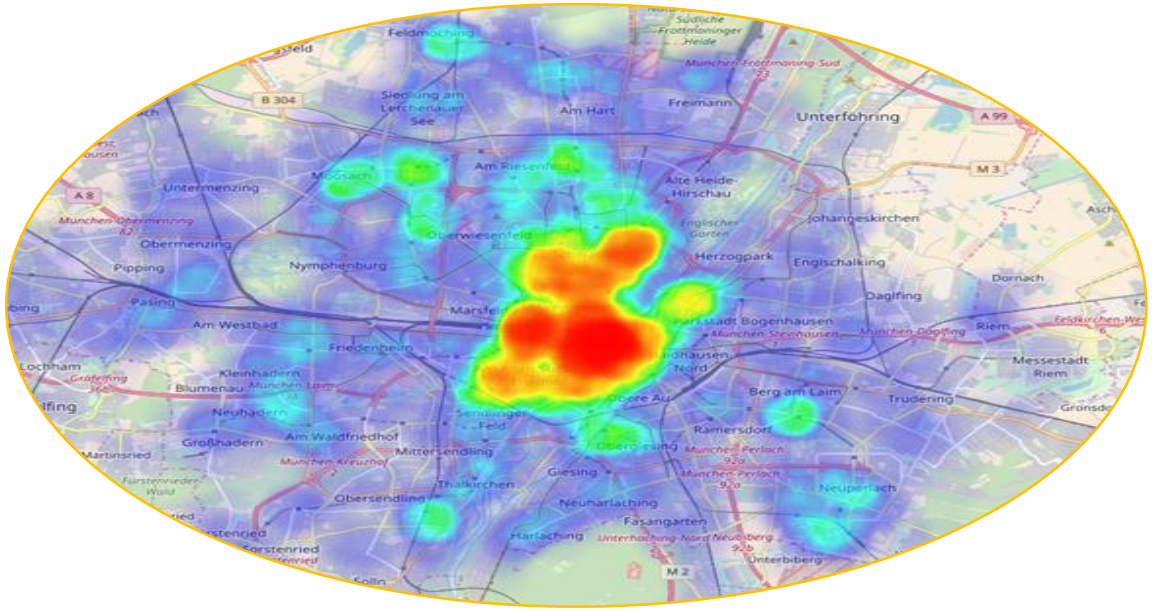


User Guide for Visualization Web-Service

2017.11.27



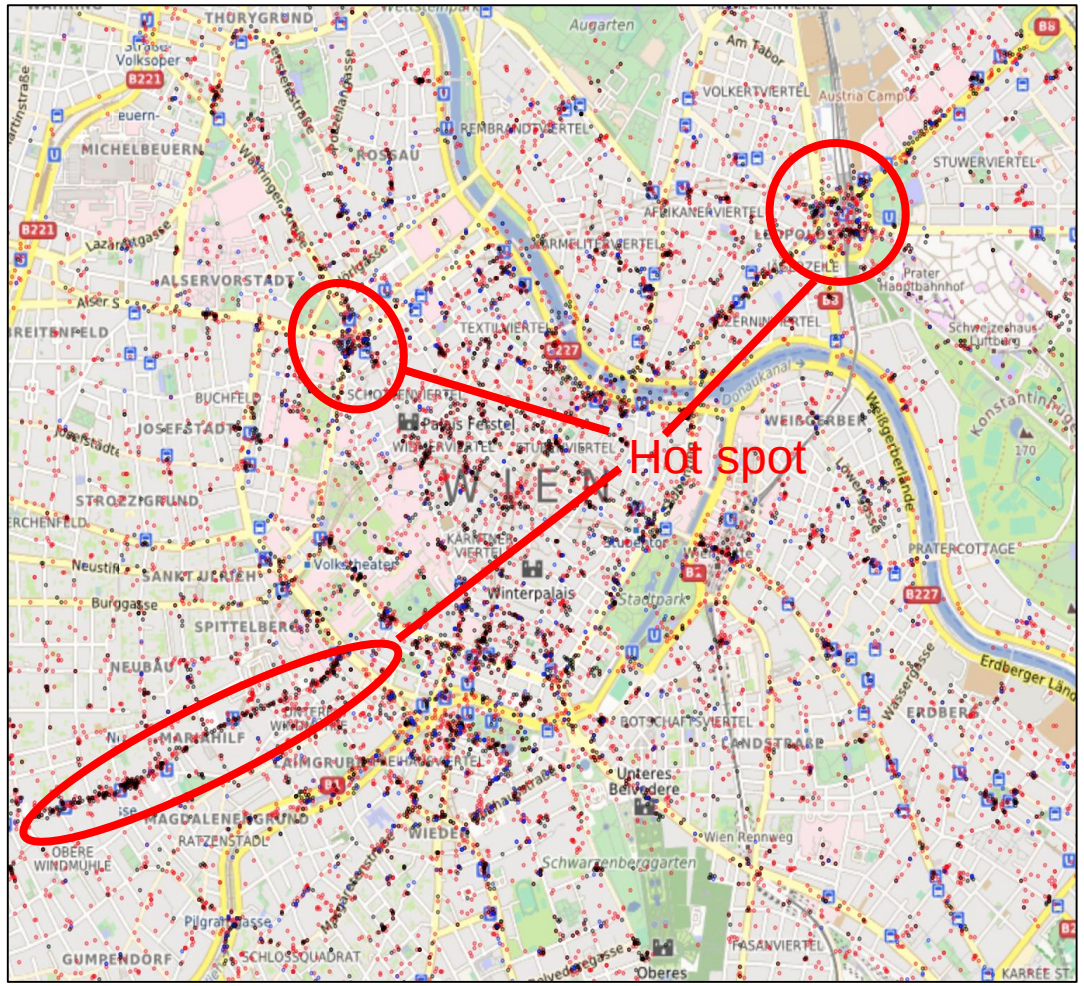
Index

- Brief
- Geo-map introduction(web-service: http://13.229.85.131:3838/)
  - BikeMapping-Current bike point
  - Heatmap-Start & End point
  - Trackpath-Tracking trips
- How to do maps?

Brief

To become a data driven company like us, we collect diversity data, such as coordinate data and so on, but how can we get some valuable information from those data?

Visualizing them on map, we create a mapping web-service. Through bike-mapping map, heat map and Track path map. We not only can know the riding condition, but operate bikes easily.

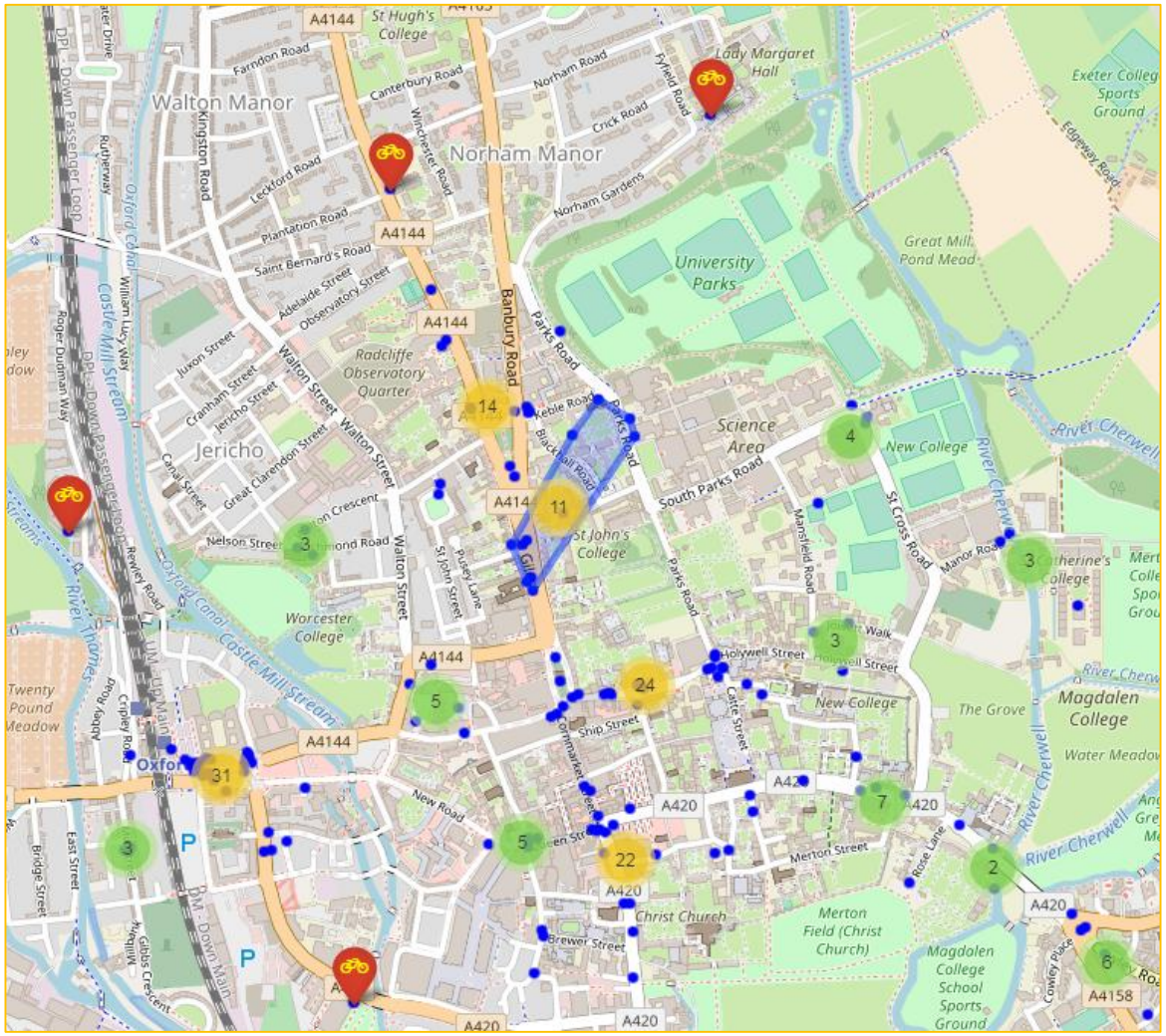


**Now we collect the coordinate data from user's mobile device, so it might be a bit bias.*

Geo map

Bike Mapping

- End point of last trip or the deployed point(bikes which haven’t been ridden before)
- It shows the regional bikes amount.(you can move the mouse to the number and see the range of region)
- If the single bike cannot be counted to the near bikes, it will show the red-yellow icon.



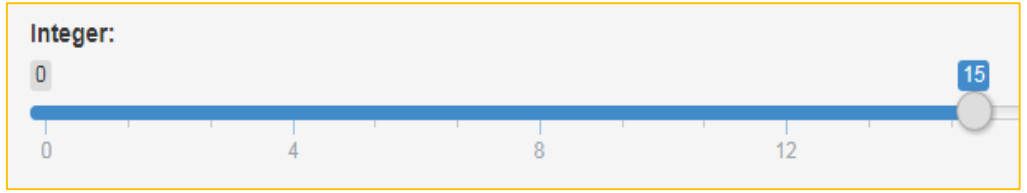
Current bike point(last trip end point)

**Now we collect the coordinate data from user’s mobile device, so it might be a bit bias.*

Geo map

Heatmap

- It shows the distribution of start point and end point. (High density = Red region, Low density = blue region)
- Compare the heat map of start & end point to see the users riding condition
- Adjust the slider to change the radius(no unit) of every hot spot



Start point

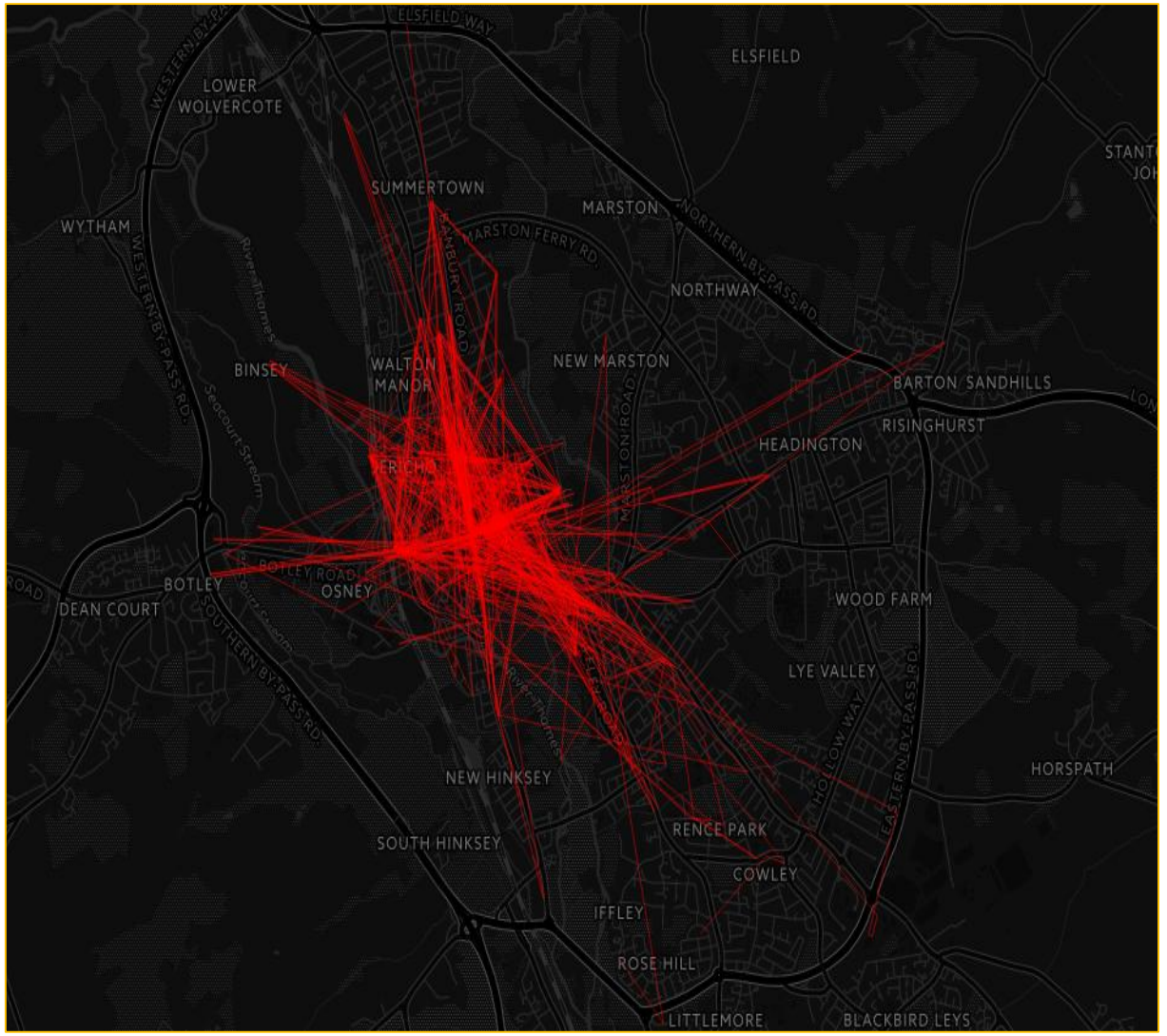
End point

**Now we collect the coordinate data from user's mobile device, so it might be a bit bias.*

Geo map

Track path

- Except for the start and end points, we collect the coordinate data every few seconds during a trip. Therefore, we can connect every single point to become a line and see the user trip path.
- Notice!! Every trip might contain a few coordinate points, thus, filtering data first and don't upload the data size more than 3MB(or you can separate to several cities)



Trip track

**Now we collect the coordinate data from user's mobile device, so it might be a bit bias.*

How to do maps?

Work flow

Export the Map data on BDP dashboard

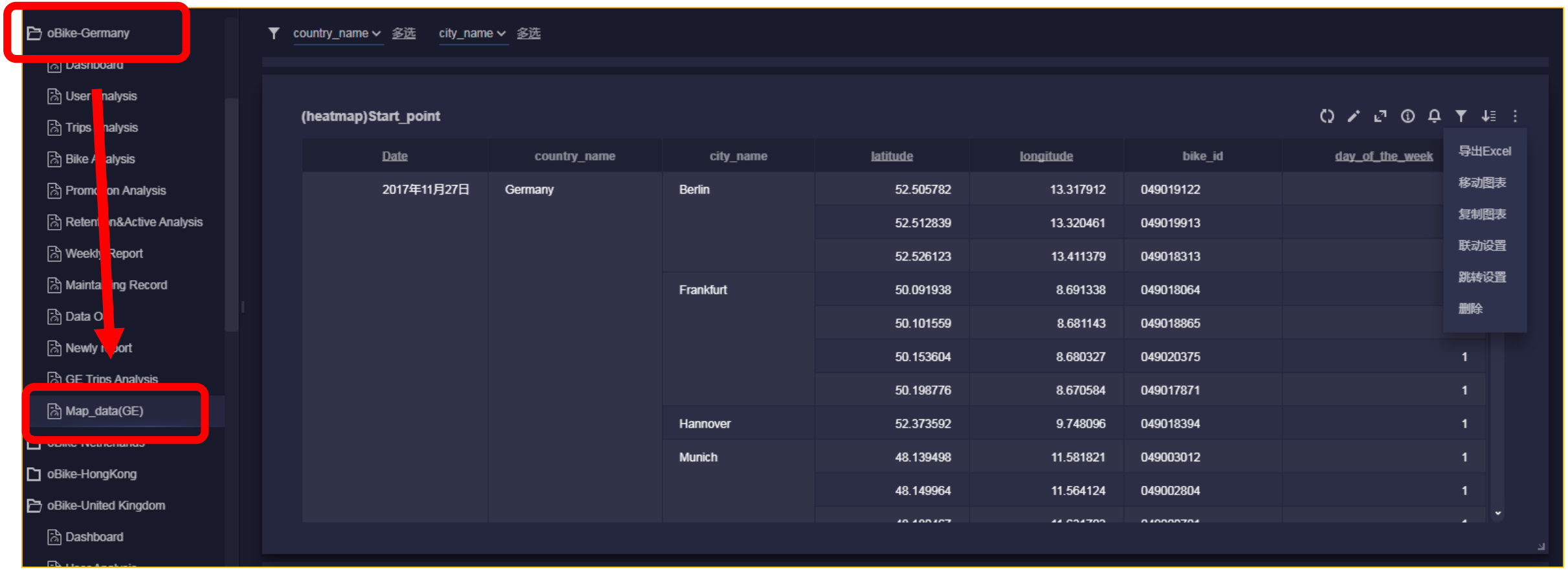
oBike-{Country Name}
→ Map_data({Country Name})
Options:
1. BikeMapping
2. Heatmap
3. Trackpath

Upload to the web-service(http://13.229.85.131:3838)

Note:
- Please filter the data in excel before upload them(especially Track path)
- Format: must be xlsx.file
- Cannot contain missing value

How to do maps? -Demo

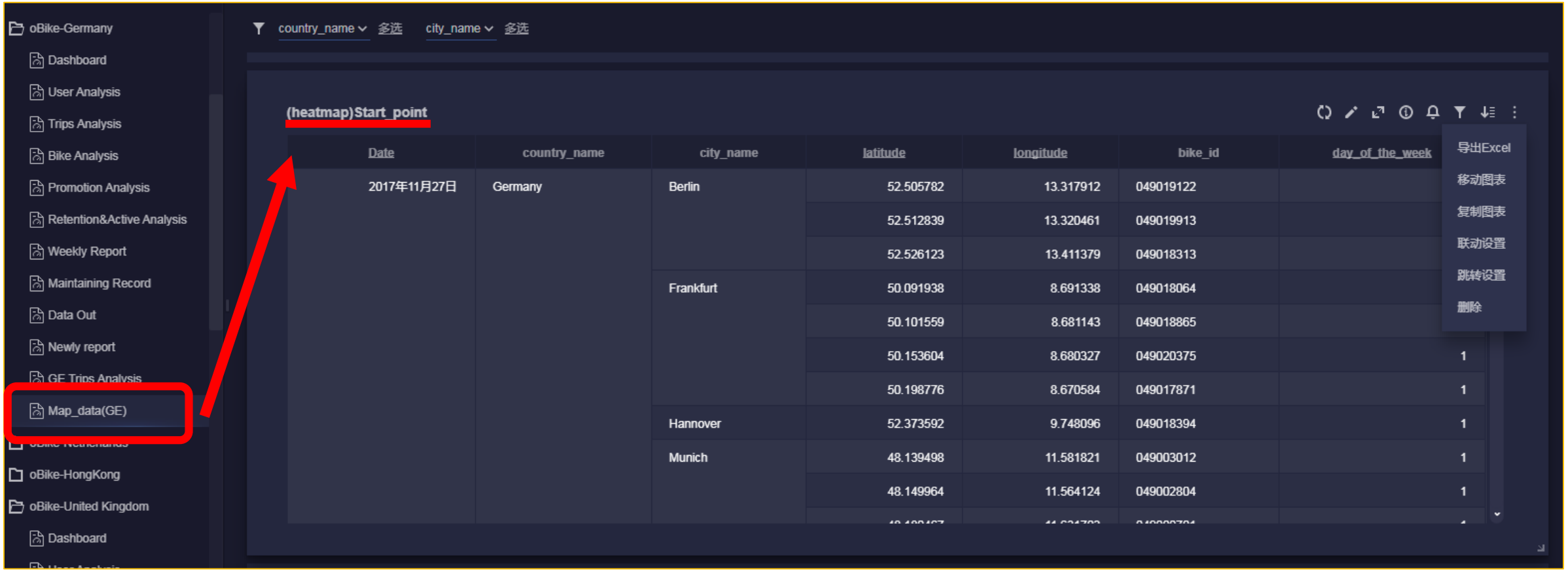
Step1: Find the Map data on BDP



Date	country_name	city_name	latitude	longitude	bike_id	day_of_the_week
2017年11月27日	Germany	Berlin	52.505782	13.317912	049019122	
			52.512839	13.320461	049019913	
			52.526123	13.411379	049018313	
		Frankfurt	50.091938	8.691338	049018064	
			50.101559	8.681143	049018865	
			50.153604	8.680327	049020375	1
			50.198776	8.670584	049017871	1
		Hannover	52.373592	9.748096	049018394	1
		Munich	48.139498	11.581821	049003012	1
			48.149964	11.564124	049002804	1

How to do maps? -Demo

Step2: Choose the sheet you want(bikemapping, heatmap or trackpath)



Date	country_name	city_name	latitude	longitude	bike_id	day_of_the_week
2017年11月27日	Germany	Berlin	52.505782	13.317912	049019122	
			52.512839	13.320461	049019913	
			52.526123	13.411379	049018313	
		Frankfurt	50.091938	8.691338	049018064	
			50.101559	8.681143	049018865	
			50.153604	8.680327	049020375	1
			50.198776	8.670584	049017871	1
		Hannover	52.373592	9.748096	049018394	1
		Munich	48.139498	11.581821	049003012	1
			48.149964	11.564124	049002804	1

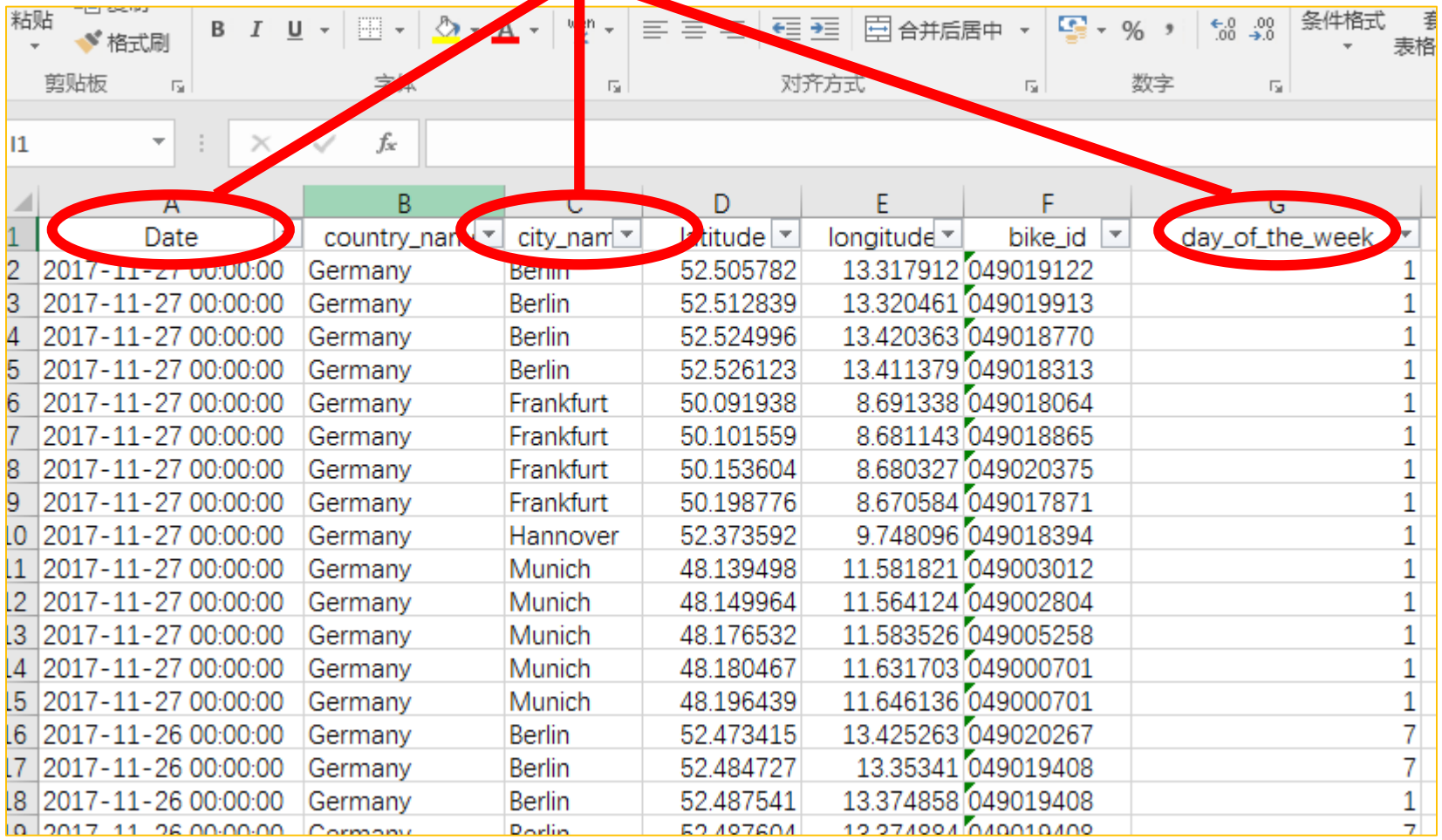
How to do maps? -Demo

Step3: Export the file(xlsx)

Date	country_name	city_name	latitude	longitude	bike_id	day_of_the_week
2017年11月27日	Germany	Berlin	52.505782	13.317912	049019122	
			52.512839	13.320461	049019913	
			52.526123	13.411379	049018313	
		Frankfurt	50.091938	8.691338	049018064	
			50.101559	8.681143	049018865	
			50.153604	8.680327	049020375	1
			50.198776	8.670584	049017871	1
		Hannover	52.373592	9.748096	049018394	1
		Munich	48.139498	11.581821	049003012	1
			48.149964	11.564124	049002804	1

How to do maps? -Demo

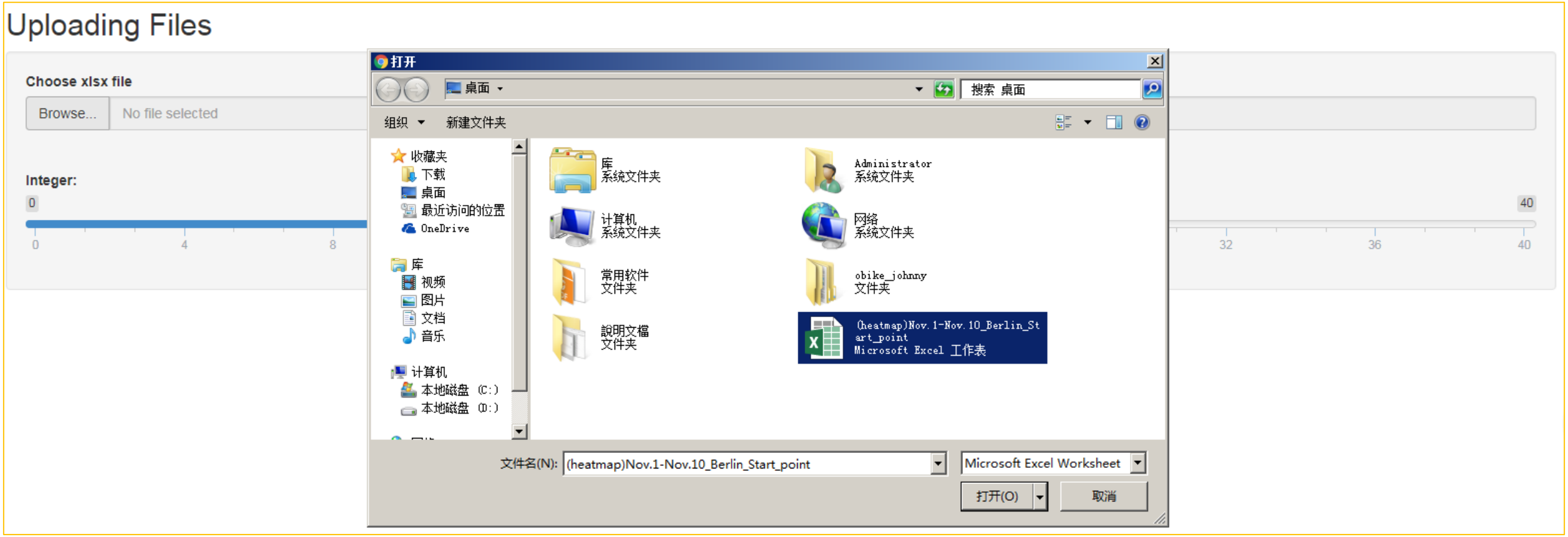
Step4: Filter the data(e.g. city_name : Berlin, Date = 2017.11.01-2011.11.10)



	A	B	C	D	E	F	G
1	Date	country_nam	city_nam	titude	longitude	bike_id	day_of_the_week
2	2017-11-27 00:00:00	Germany	Berlin	52.505782	13.317912	049019122	1
3	2017-11-27 00:00:00	Germany	Berlin	52.512839	13.320461	049019913	1
4	2017-11-27 00:00:00	Germany	Berlin	52.524996	13.420363	049018770	1
5	2017-11-27 00:00:00	Germany	Berlin	52.526123	13.411379	049018313	1
6	2017-11-27 00:00:00	Germany	Frankfurt	50.091938	8.691338	049018064	1
7	2017-11-27 00:00:00	Germany	Frankfurt	50.101559	8.681143	049018865	1
8	2017-11-27 00:00:00	Germany	Frankfurt	50.153604	8.680327	049020375	1
9	2017-11-27 00:00:00	Germany	Frankfurt	50.198776	8.670584	049017871	1
10	2017-11-27 00:00:00	Germany	Hannover	52.373592	9.748096	049018394	1
11	2017-11-27 00:00:00	Germany	Munich	48.139498	11.581821	049003012	1
12	2017-11-27 00:00:00	Germany	Munich	48.149964	11.564124	049002804	1
13	2017-11-27 00:00:00	Germany	Munich	48.176532	11.583526	049005258	1
14	2017-11-27 00:00:00	Germany	Munich	48.180467	11.631703	049000701	1
15	2017-11-27 00:00:00	Germany	Munich	48.196439	11.646136	049000701	1
16	2017-11-26 00:00:00	Germany	Berlin	52.473415	13.425263	049020267	7
17	2017-11-26 00:00:00	Germany	Berlin	52.484727	13.35341	049019408	7
18	2017-11-26 00:00:00	Germany	Berlin	52.487541	13.374858	049019408	1

How to do maps? -Demo

Step5:Upload data to the web-service to get the result!(http://13.229.85.131:3838)



How to do maps? -Demo

Step6:Upload data to the web-service to get the result!(http://13.229.85.131:3838)

Uploading Files

Choose xlsx file

Browse... (heatmap)Nov.1-Nov.10_Berlin_Start_point.xlsx

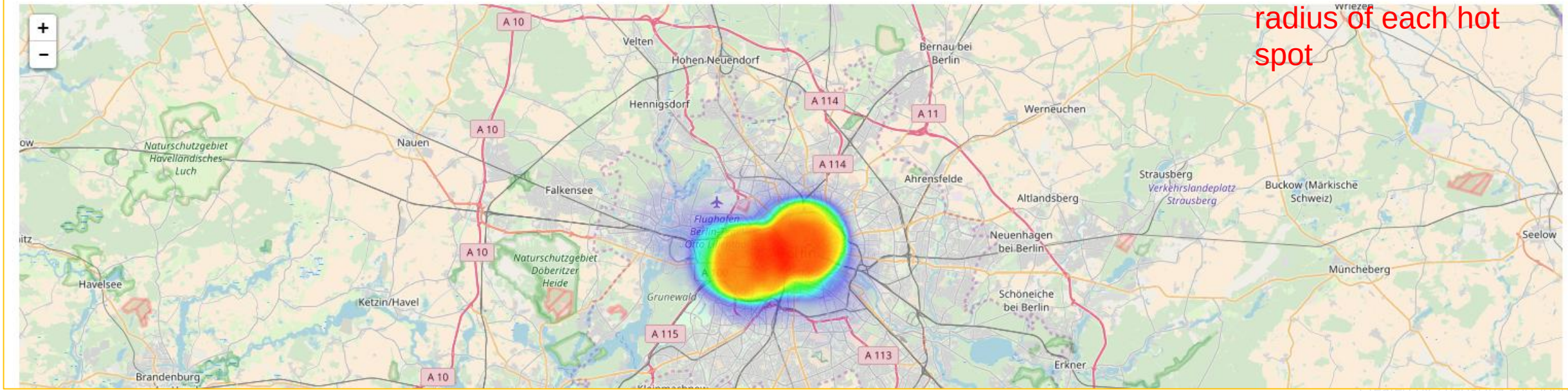
Upload complete

Integer:

0 40

0 4 8 12 16 20 24 28 32 36 40

Customize the radius of each hot spot



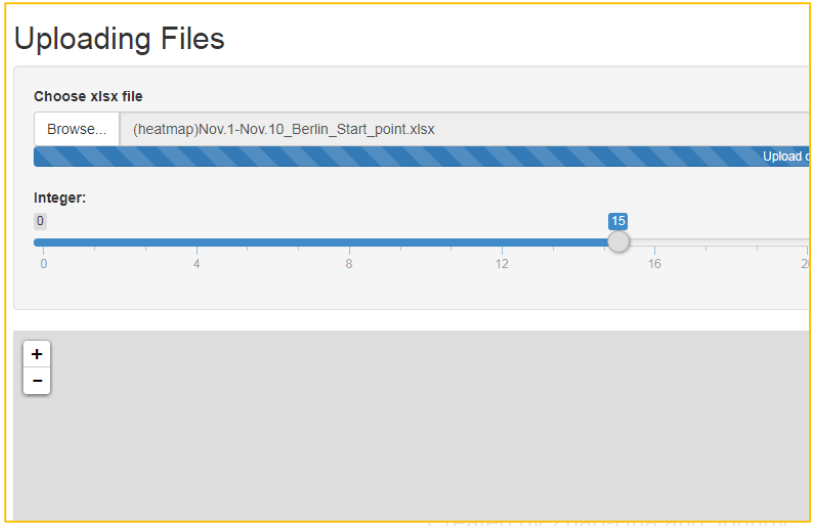
FAQ

Q1. Why can’t we find all pass data in BDP dashboard?

Ans :
Temporarily, according to the market requests and web-service burden, we just open the data period such like:
(Heatmap) Start_point : in 30 days(include today)
(Heatmap) End_point : in 30 days(include today)
(Trackpath) Tracking_trips: in 7 days(include today)

Q2. Why web-service appears the error message after uploading the data?(display grey image)

Ans :
There might be some missing value. Please omit the row of missing value and re-upload the data again.



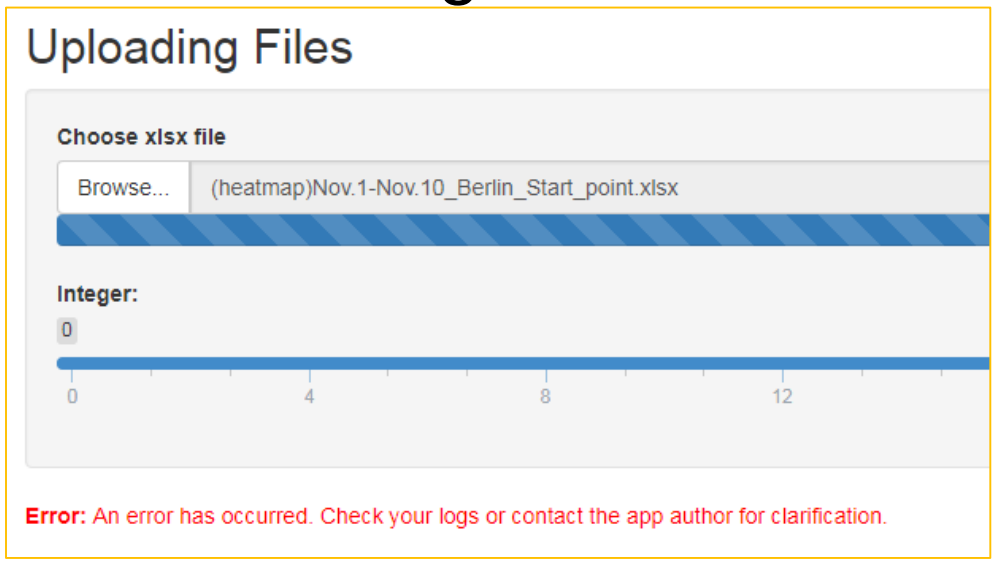
FAQ

Q3. Why web-service appears the error message after uploading the data?

Ans:

Verify whether the data contain those column below or not(case-sensitive)?

- BikeMapping : bike_id, latitude, longitude
- Heatmap : latitude, longitude
- Trackpath : track_id, latitude, longitude



Q4. Why web-service doesn't display the map after uploading the data for a while?

Ans: The uploaded data size might be to large. (especially track path, we collect the coordinate data every few seconds during a trip.)

Uploading data recommendation:

BikeMapping & Heatmap : data size below 5MB

Trackpath : data size below 3MB

Thank you