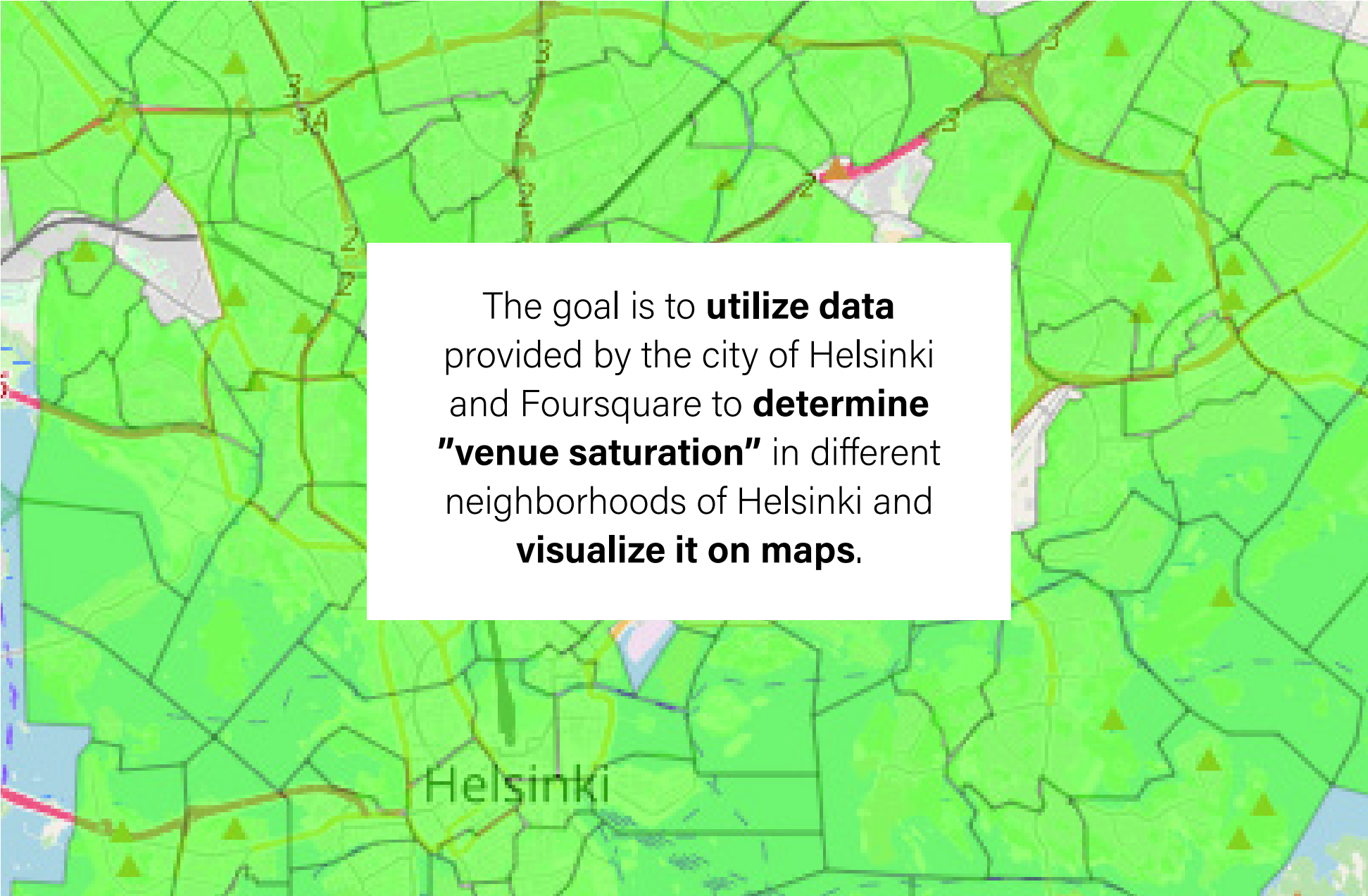# Helsinki Hoods

Where to Start a Restaurant in Helsinki?
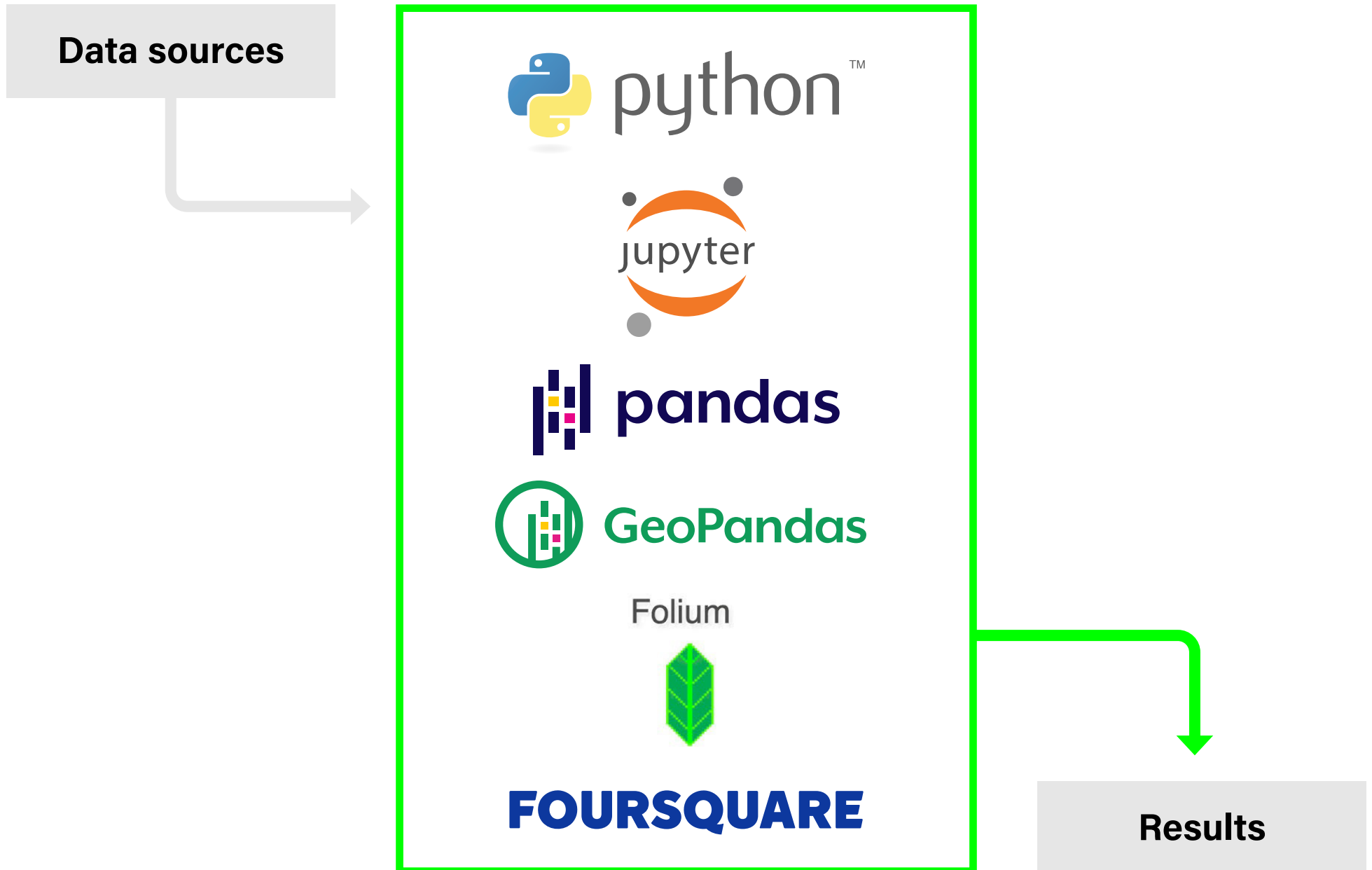
Applied Data Science Capstone Project

Simo Sahla

Finding business opportunities

The goal is to **utilize data** provided by the city of Helsinki and Foursquare to **determine "venue saturation"** in different neighborhoods of Helsinki and **visualize it on maps**.

Powerful free tools help achieve the goal

Data sources

Results

Combining data from different sources

City of Helsinki		Foursquare

Geographic data   Population data   Venues data

	Neighborhood	geometry	Latitude	Longitude	Population	Venues
145	Ala-Malmi	POLYGON ((24.99368 60.24165, 24.99380 60.24163...	60.245067	25.020464	6179.0	61
102	Alppikyla	POLYGON ((25.06181 60.25196, 25.06171 60.25187...	60.259147	25.066643	1758.0	29
2	Alppila	POLYGON ((24.93263 60.19284, 24.93265 60.19278...	60.190408	24.939674	4530.0	141
28	Arabianranta	POLYGON ((24.96355 60.20103, 24.96383 60.20098...	60.204464	24.980452	7452.0	87
141	Aurinkolahti	POLYGON ((25.14417 60.20350, 25.14403 60.20347...	60.203296	25.155540	8033.0	33
...	...		...	...	...	...
133	Viikinranta	POLYGON ((24.97919 60.21964, 24.97919 60.21953...	60.215065	25.005489	1289.0	41
91	Vilhonvuori	POLYGON ((24.95356 60.18100, 24.95388 60.18078...	60.182403	24.962107	7386.0	164
126	Yliskyla	POLYGON ((25.02869 60.16849, 25.02885 60.16811...	60.175399	25.053209	12626.0	17
144	Yla-Malmi	POLYGON ((24.99267 60.25196, 24.99261 60.25189...	60.253461	25.004028	6457.0	74
147	Ostersundom	POLYGON ((25.14402 60.26030, 25.14408 60.26019...	60.258437	25.193763	497.0	4

Calculating venues-to-residents ratio

$$\frac{\textbf{Number of venues in neighborhood}}{\textbf{Population of neighborhood}} = \textbf{Venues-to-residents ratio}$$

Venues within a 2,000 m radius of neighborhood centroid point

To get more readable ratio figures, population is presented in thousands of residents

tude	Longitude	Population	Venues	Ratio
067	25.020464	6179.0	61	9.872148
147	25.066643	1758.0	29	16.496018
408	24.939674	4530.0	141	31.125828
464	24.980452	7452.0	87	11.674718
296	25.155540	8033.0	33	4.108054

Plotting the data on a choropleth map

059 19   67

Venue ratio (venues per 1000 residents)

The intensity of green represents the venues-to-residents ratio of the neighborhood.