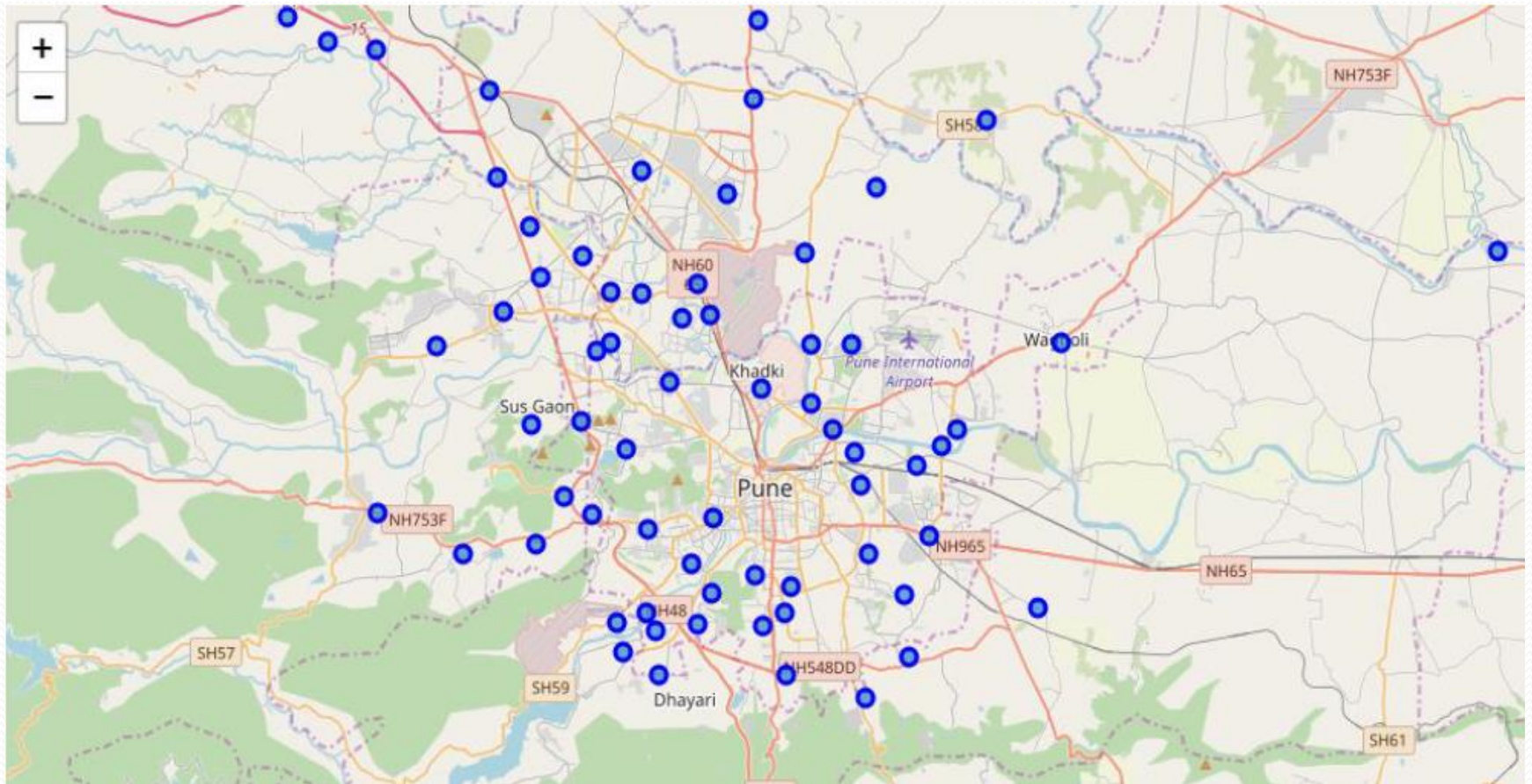# Finding optimum location for new shopping mall

Usefulness of project

- This project is useful for the businessmen and property developers who wants to open a new shopping mall in Pune city in Maharashtra, India

- Project focuses on finding a location without or less number of any shopping malls in vicinity.

- Finding location without any shopping malls in vicinity will reduce a competition within various shopping malls.

- This will help to earn more revenue by attracting more customers in around neighborhood.
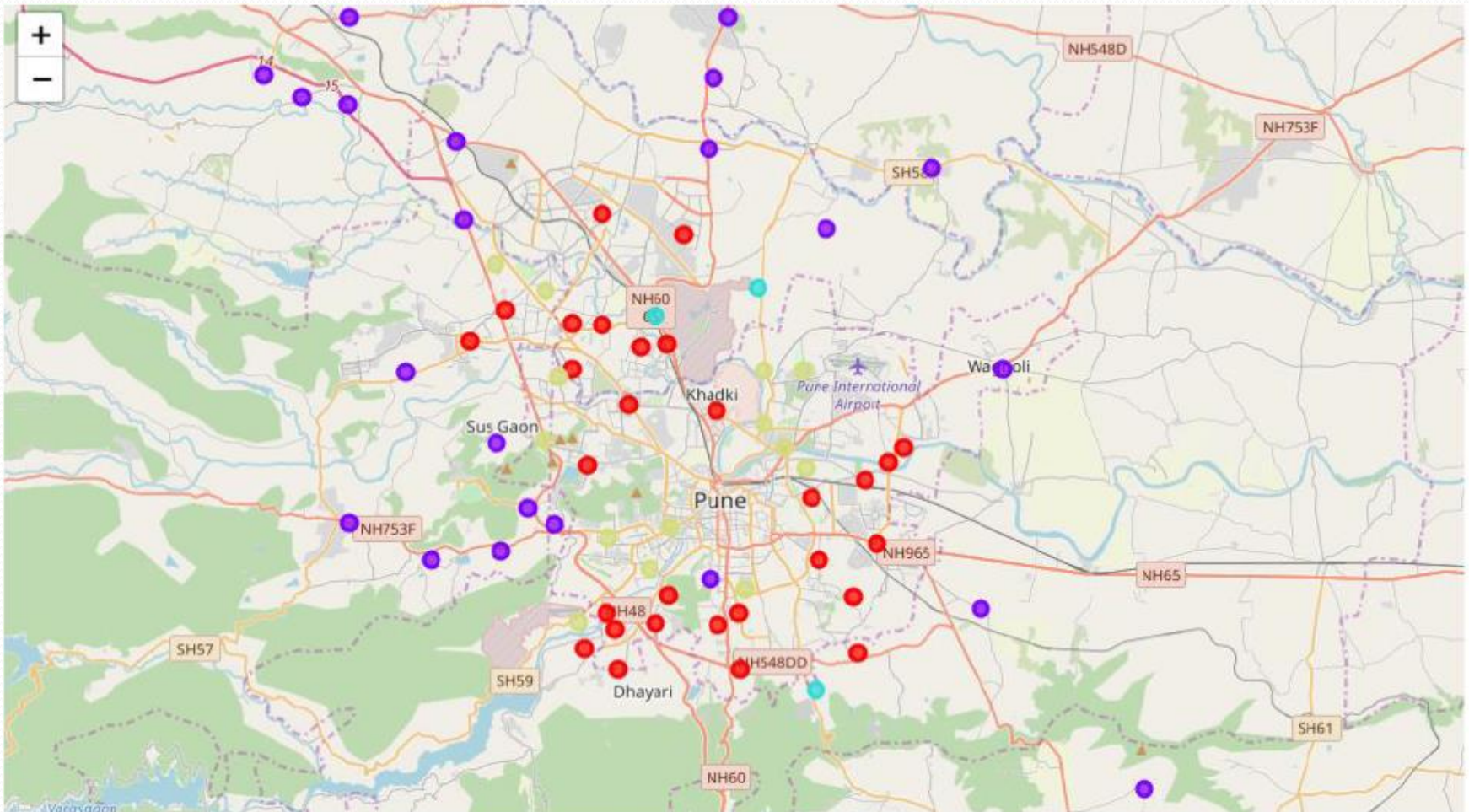
Data acquisition

- Data is readily available on Wikipedia page as a list of neighborhoods in Pune. https://en.wikipedia.org/wiki/List_of_neighbourhoods_in_Pune

- Initially there were 82 neighborhoods.

- Coordinates of each neighborhood are found using 'geocoder' function.

- We decided to look for vicinities within km of Pune centre after which 4 vicinities are dropped.

Data visualization using map with Pune as center

Data visualization with K means clustering with 4 clusters

Results of clustering

Cluster Sr. No.	Color used in map	Total vicinities with one or more malls	Vicinities without any mall in them
Cluster 1	Red	30	0
Cluster 2	Dark Blue	31	31
Cluster 3	Light green	3	0
Cluster 4	Green	14	0
	Total	**78**	**31**

Summary of results

- Cluster 2 has 31 neighborhoods having no malls at all.
- These vicinities are highly preferable for opening a new Shopping Mall.
- Shopping malls in cluster 1 are likely suffering from high competition and hence it is advised to avoid those vicinities.

Conclusion

- Purpose of this project was to identify Pune city areas close to center with low number of shopping malls.
- There is a scope of improvement to this project in which we can further modify our analysis.
- Ideas for improvement:
- ➢ data of social status of the people in those vicinities
- ➢ data of available land sites around
- ➢ checking available transportation