GEOTA PROJECT

The Impact of Industrialization on Air Quality

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Team members

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Introduction

Industrialization has led to significant economic growth in India, particularly in the national capital region. However, the rapid industrialization has resulted in high levels of pollution, particularly air pollution, which has become a major health concern for the citizens of New Delhi.

Objectives

- To identify the sources of air pollution in New Delhi, with a specific focus on industrial emissions.

- To identify areas with high levels of air pollution and potential sources of pollution

- To contribute to the overall understanding of the relationship between industrialization and air quality, and to provide a basis for future research in this field.

Methodology

- ❖ Used Inverse Distance Weighting (IDW)interpolation for
- ❖ Description of the data processing and analysis steps:
    - ➢ Importing and joining the shapefiles and air quality data
    - ➢ Visualizing the data using thematic maps and charts
    - ➢ Running IDW interpolation on the air quality data
    - ➢ Analyzing the spatial patterns and correlations between the variables
    - ➢ Using the interpolation results to predict the change in air quality
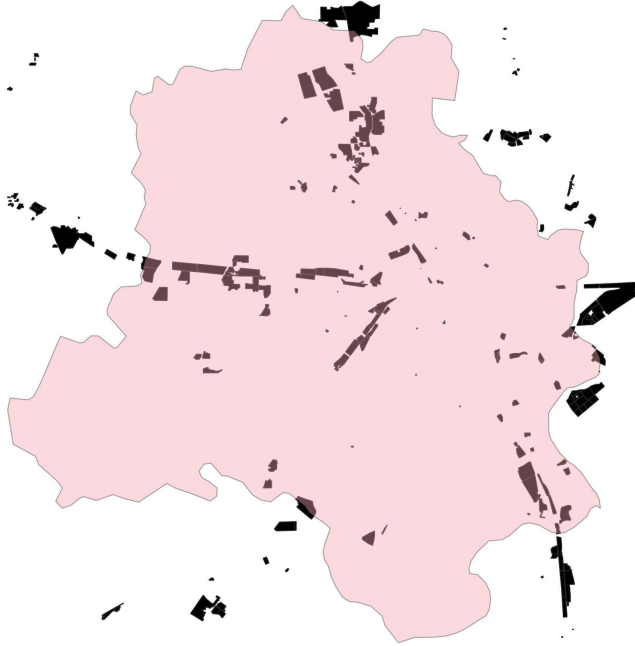
Intersection

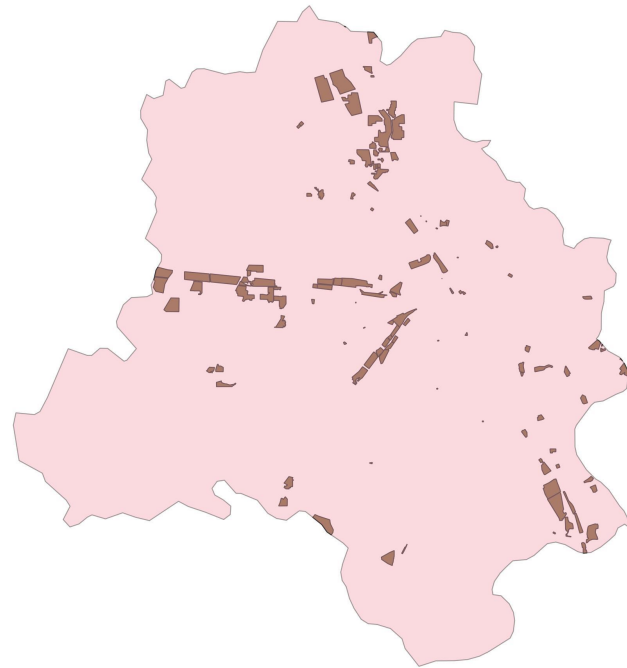Forest Area before Intersection
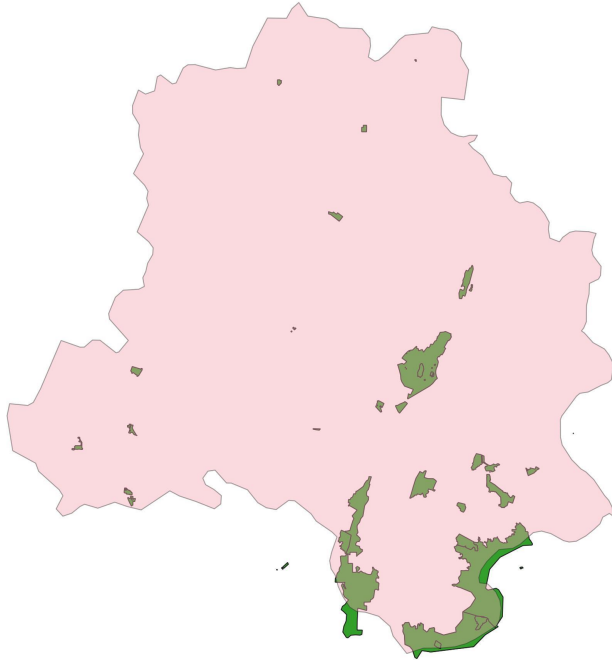
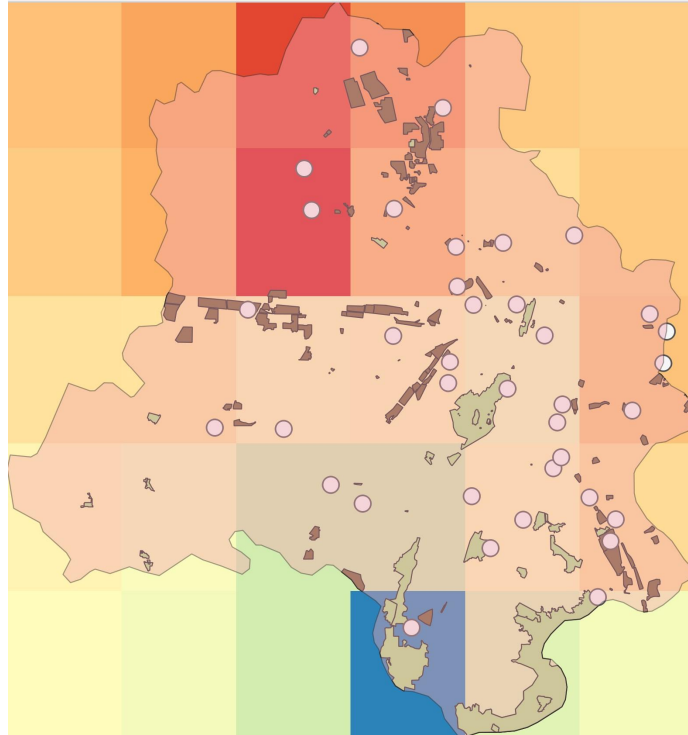Forest Area After Intersection
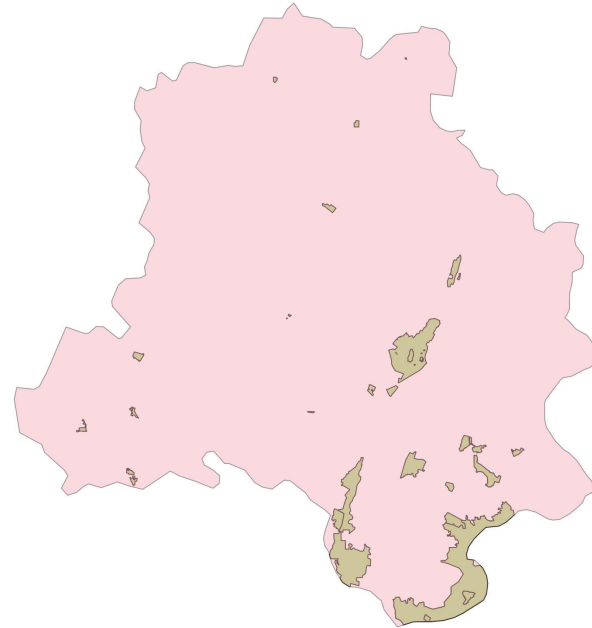
Intersection

Industries before Intersection

Industries After Intersection

IDW Interpolation

Individual Contributions

Sampreeth Jangala

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Sai Charan Yadav Peram

PM2.5 Monthly Data, IDW Interpolation

Industries Layer, Buffer Zones

Data collection, Vector analysis

Land cover data and air quality data analysis

Results

❖ Presentation of the main findings and results:
  ➢ Identification of areas with high levels of PM2.5 pollution and their spatial distribution
  ➢ Mapping of the industrial areas and their proximity to residential and commercial areas
  ➢ Comparison of the air quality data before and after IDW interpolation
  ➢ Prediction of the change in air quality based on the interpolation results