**Statement of contribution**

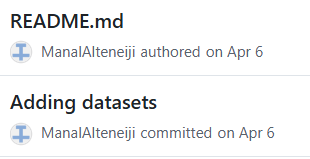
This project was a collaborative effort carried out by our team, **GeoAirMob**, with every individual contributing significantly to its success. The work spanned multiple phases, including data preparation, geospatial modeling, machine learning, visualization, and documentation. Every participant offered their distinct technical, analytical, or editorial skills to ensure the project was well-executed:

|  |  |  |
| --- | --- | --- |
| **Team Member** | **Role and Contribution** | **Signature** |
| **Manal** | * Dataset preparation. * Methodology development. * Code implementation. |  |
| **Mariam** | * Paper selection. * Explained and analyzed the results for phase 1. * Conclusion and feature work. |  |
| **Asma** | * Abstract. * Introduction. * Code implementation. |  |
| **Hawra** | * Literature review. * Explained and analyzed the results for phase 2. * Report compilation and LaTeX formatting. |  |

**Screenshots from GitHub**

**Manal contribution:**

Added the datasets



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Code implementation:

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* Prepared and cleaned datasets.
* Developed geohash-based spatial zones.

Code implementation merged my work with Asma: A screenshot of a social media post

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* Using the Elbow Method to identify the number of clusters.
* Built regression models with boosting techniques to predict pollution levels.
* Designed a simulation framework for mobility–pollution interaction.
* Scaled forecast inputs using Ericsson mobility projections.
* Compared historical vs. projected raster pollution data.
* Visualized Phase 2 trends for mobility and air quality forecasting

Added Methodology to GitHub:

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**Asma contribution:**

Added Abstract and introduction to GitHub:

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Code implementation:

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* Conducted clustering and regression analysis for Phase 1.
* Analyzed and visualized forecasted raster data.
* Created time-series plots comparing mobility and air quality.

Added a dataset:

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**Mariam contribution:**

Added the selected research papers:

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Explained and analyzed the results for phase 1 and added a file for the figures:

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Added the Conclusion and future work:

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**Hawra contribution:**

Added the literature review:

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Added phase 2 results and discussion:

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Added phase 2 figures:

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Added the full report:

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