

Leadership Progress Report

Plan

This trimester, I plan to grow into leading the integrating data and modelling for the Air Pollution and Respiratory Illness Correlation study. Having responsibility for the integration of the World Air Quality Index and AIHW respiratory admissions geographic and temporal datasets while maintaining data integrity and quality is my goal. In the project's larger framework, I think myself adding to the technical complexity and interpretative clarity of our results, particularly using regression modelling and geographic visualization tools like heat maps. I will work with the team as I develop into this leadership position to help identify uncertainties, promote ethical and insightful interpretations, and match our study with public health objectives. By the end of the trimester, I intend to be able to guide future directions in the project and help communicate findings to both technical and non-technical stakeholders.

Progress Update

Describe the current progress on the bigger objectives you are aiming to achieve.

- Took the lead on defining the data integration strategy, outlining steps for temporal alignment, geographic matching, and handling missing or inconsistent entries.
- Coordinated with team members to assess dataset quality, documenting issues and providing recommendations for preprocessing workflows.
- Guided discussions on ethical considerations around sensitive health data, ensuring compliance with Australian data usage regulations.

What initiatives have you established, and effective have they been?

- GitHub's framework for collaboration: Version control procedures were developed and used to maintain the organization of datasets, scripts, and documentation; this increased productivity and reduced file duplication.
- Check-ins for integration every week: introduced brief updates that were exclusively focused on modelling and integration activities; this helped in identifying obstacles early and bringing team members into alignment with goals.

Describe future initiatives you have planned, and what you aim to achieve through these initiatives:

- Regression modelling leadership: Plan to do discussion in the team on model selection, evaluation metrics, and interpretation to ensure consistent analytical approaches.
- Stakeholder-oriented visualisation templates: Develop heat map and spatial analysis templates designed for both technical and policy-focused audiences to strengthen impact and clarity of findings.
- Documentation for replicability: Create an end-to-end guide covering dataset sourcing, cleaning, integration, and modelling to support continuity in future trimesters.