

# CAPRI

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## AIR POLLUTION & RESPIRATORY ILLNESS CORRELATION STUDY

Michael Christopher

Lead on data integration and modelling

Integrating environmental  
and health datasets to  
uncover relationships and  
inform public health  
decisions.

# ACHIEVEMENTS SO FAR

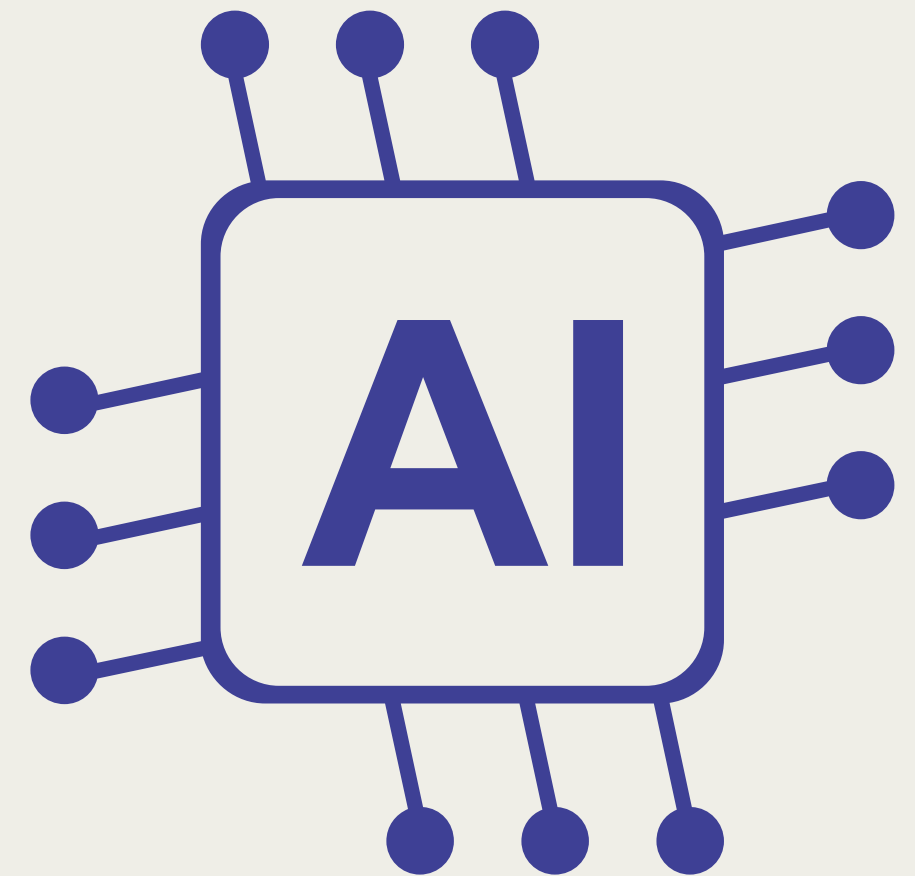
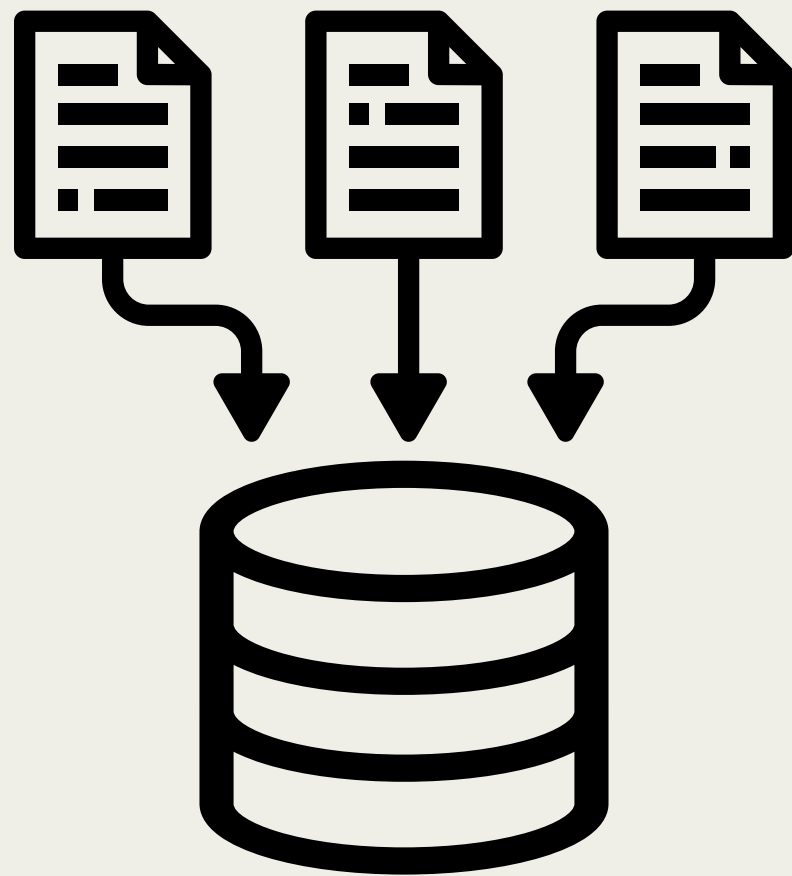
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- **Data integration workflow**, streamlined integration of time series and geographical data
- **GitHub collaboration framework**, tracking updates and version controlling
- **Weekly integration check-ins**, improving early detection of blockers.
- **Ethical handling of sensitive health data**, make sure to adhere to Deakin's data privacy regulation

# TECHNICAL CONTRIBUTIONS

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- **Dataset gathering**, Victorian air quality datasets
- **Data preprocessing**, handling missing value, encoding, normalization, and removing duplicates
- **Model selection**, predicting Victoria's future air quality index



# LEADERSHIP & INITIATIVE

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- Facilitated **team workshops** on integration and modelling best practices.
- Create models for **repeatable analysis and visualisation** for upcoming groups.
- Coordinated across sub-teams to ensure **consistency in analytical approaches**.



# LESSONS & GROWTH

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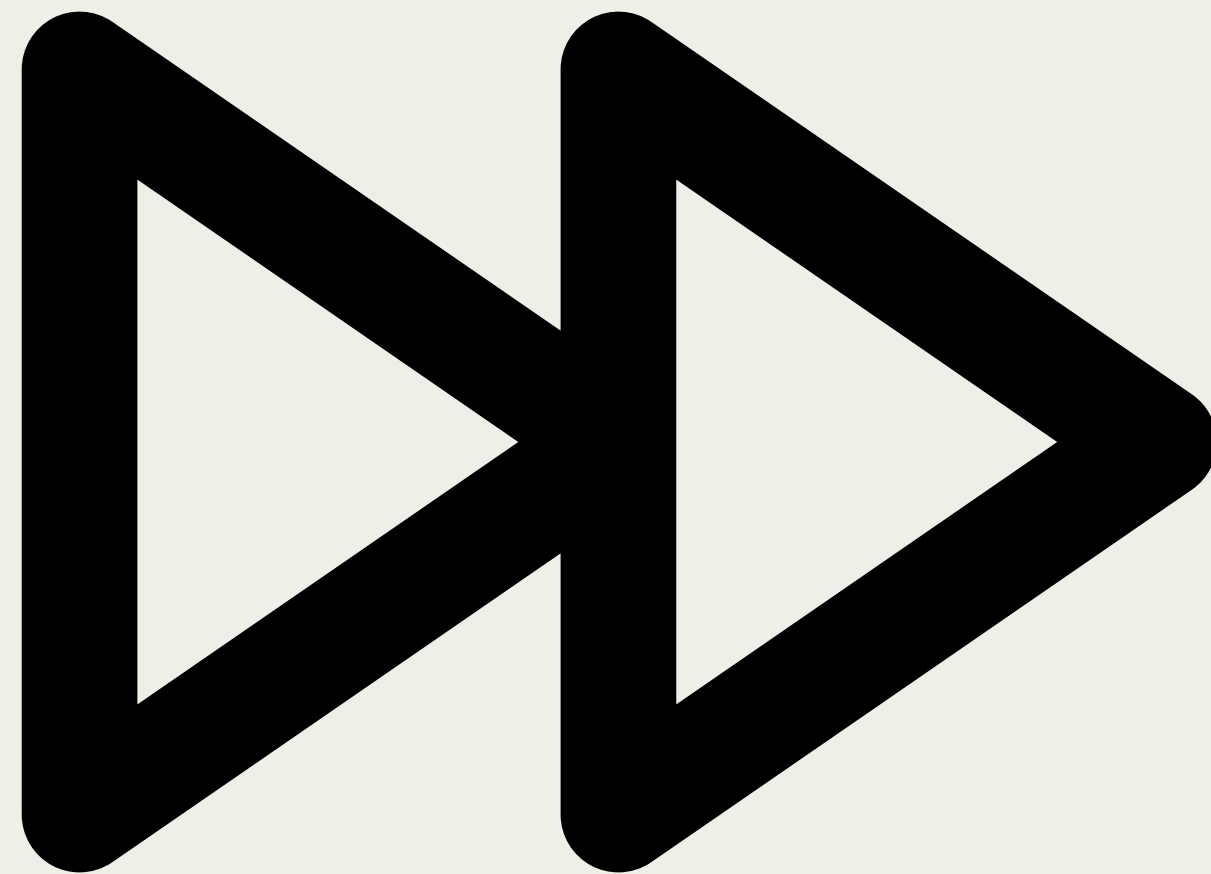
- Strengthened skills in **geographical & time series** data handling.
- Learned the value of **clear version control & documentation** in collaborative research.
- Developed **confidence in leading technical direction** while aligning with project goals.



# NEXT STEPS & VISION

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- Deliver **robust regression models** with stakeholder-ready visualisations.
- Finalise **replicable integration scripts** for ongoing use.
- Support team in **interpreting results** for both technical and public health audiences.



THANK

YOU