

Crop Yield prediction and Response Analysis for On-Farm Precision Experimentation trials

Lemuel Blignaut is currently completing his MSc in Applied Mathematics at Stellenbosch University, with a specific focus on precision agriculture. His research interests intersect mathematical modelling, data analysis, and real-world environmental applications.



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Aim

- To build a data-cleaning and machine learning pipeline to predict yield responses in seed and fertiliser trials.
- To interpret feature contributions and evaluate the direction and magnitude of localised interactions.

Data: Import & augmentation

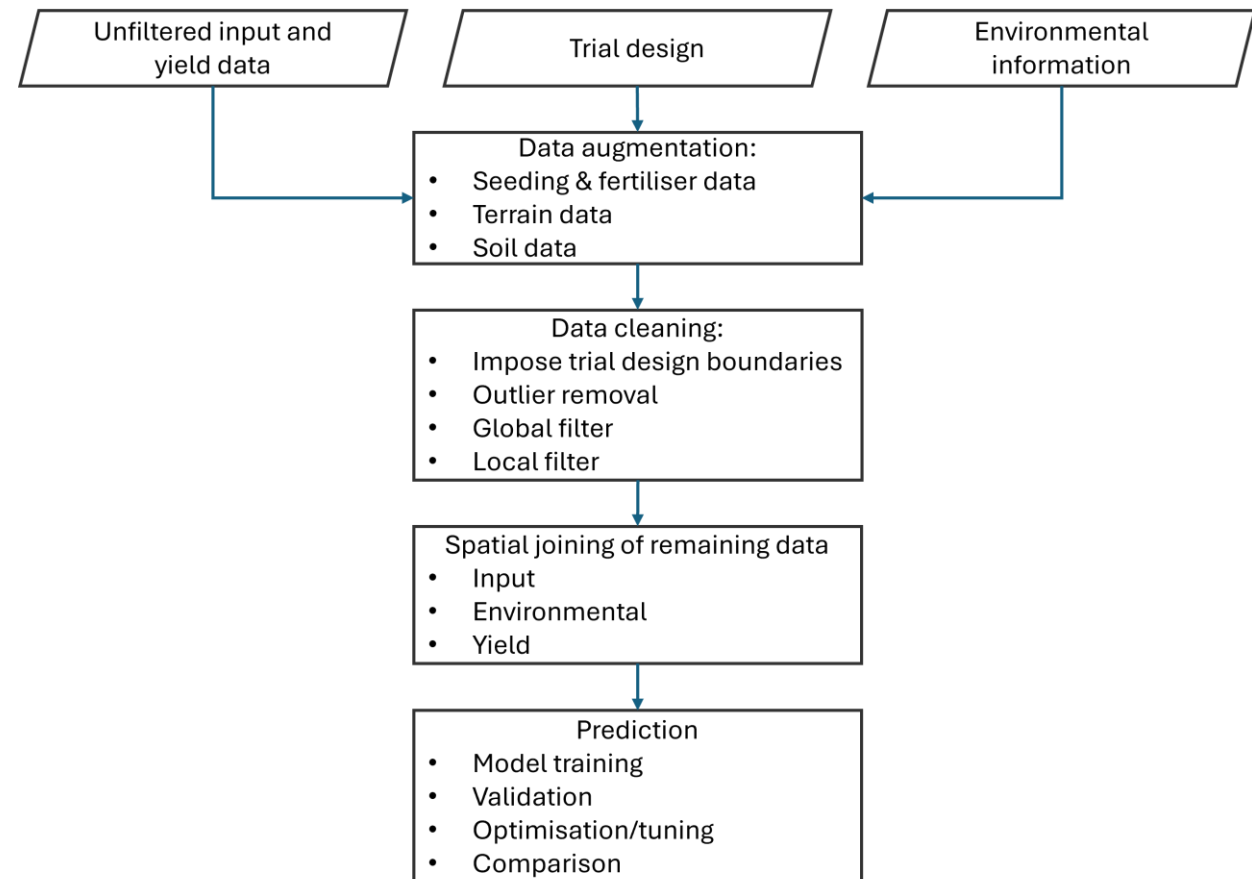
Data: Cleaning

Analysis: Train and test machine learning model(s)

Analysis: Interpretation of model & results

Objectives: Data cleaning protocol

- Conduct a literature review to categorise yield map errors and identify existing data cleaning workflows.
- Assess the performance of various machine learning models used for yield prediction.
- Create a generalised data cleaning protocol balancing data retention with outlier elimination.



Objectives: Model interpretation

- Train and test machine learning models on the cleaned dataset.
- Assess how data cleaning affects predicted yield.
- Analyse relationships between key variables and crop yield.

