

Working Title: Implementing Machine Learning Techniques in Epidemic Modelling

Overview: This literature review will critically examine the application of machine learning (ML) in epidemic modelling, with an emphasis on how ML approaches compare to traditional models in terms of accuracy, flexibility, and interpretability. The review will be based on recent peer-reviewed research, with particular attention to methodological rigour, key challenges, and emerging gaps in the literature.

Planned Structure:

1. Introduction

- Defining epidemic modelling and explaining its relevance
- Purpose and scope of the review

2. Traditional and Machine Learning Approaches in Epidemic Modelling

- Overview of classical models and commonly used ML models
- Comparisons between approaches, focusing on accuracy, flexibility and interpretability

3. Evaluation of Research Methodologies

- Types and sources of data used
- Model training, validation techniques, and evaluation metrics
- Common methodological challenges

4. Gaps and Discrepancies in the Literature

- Inconsistencies in findings or results across different studies
- Limitations in current approaches

5. Conclusion and Future Research Directions

- Summary of key findings
- Identification of areas for improvement and future investigation