

Assessing Covid-19 Situation in Vietnam Using a Data-Driven Epidemiological Compartmental Model

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Outline

- 1 Introduction
- 2 Literature review
- 3 Methodologies
- 4 Results
- 5 Discussion
- 6 Conclusion

Outline for Introduction

1 Introduction

Introduction

- Complex disease dynamics
- Lacks of research on the impacts of Non-Pharmaceutical Intervention (NPI)
- Negative financial and medical impacts

Outline for Literature review

- 2 Literature review
 - Mathematical models
 - Data-driven models
 - Data-driven compartmental models

Mathematical models

- Compartmental models
 - Basic Susceptible-Infective-Removed (SIR) and Susceptible-Exposed-Infective-Removed (SEIR) models [1]–[3]
 - Extensions that considered: government interventions and Asymptomatic infections [4]–[8]
- Agent-based models [9]–[11]

Data-driven models

- Statistical models
- Deep-learning models

Data-driven compartmental models

- Informed with covariates
- Informed with neural networks

Outline for Methodologies

3 Methodologies

Methodologies

Outline for Results

4 Results

Results

Outline for Discussion

5 Discussion

Discussion

Outline for Conclusion

6 Conclusion

Conclusion

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