

Transport and Mobility Market

Operations

Mobility-as-a-Service (MaaS)

Human-Machine Interaction

Connected and Automated Vehicles (CAV)

Algorithms & Automation

Artificial Intelligence (AI)

Future Applications

Machine Learning

Travel Behaviour Modelling

Discrete Choice Analysis

- Travel Behaviour Theory
- Data-driven Applications
- Model Development and Statistical Analysis

Dissertation Focus Areas

Chapter 3:

- Proposed generative modelling for DCA.
- Highlighting properties and identifiability.
- Comparison with conventional Latent Variable Models.

Chapter 4:

- Estimation of latent behavioural constructs without subjective psychometric indicators
- Implementation of Restricted Boltzmann Machines
- Show characterization of latent variables

Chapter 5:

- Emulating information processing constraints
- Outline Variational Inference estimation
- Interpretation of generative learning in discrete choice analysis
- Sensitivity analysis and parameter stability

Chapter 6:

- Interpretable machine learning for Multiple Discrete-Continuous data
- Derive analytical methods for elasticity, conditional probability and simulation
- Incorporate Variational Inference estimation