

# Towards Sustainable Cities through Simulation

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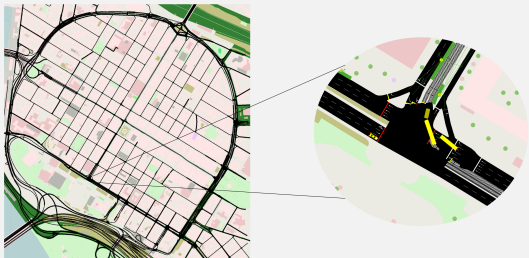
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February 14, 2024

Chair of Artificial Intelligence

- city traffic has negative impact on environment, public health, and quality of life in urban societies
- proposed solutions to these problems often difficult to test in practice
- traffic simulations allow for testing new approaches in a realistic setting
- enable easy deployment of Machine Learning (ML) and detailed analysis of impact (i.e., on congestion, noise, air pollution, etc.)

# Project Goals



1. **extend and improve traffic simulation of Mannheim in SUMO (e.g., investigate data quality)**
2. **analyze outcomes (e.g., some selection of):**
  - car/truck prohibitive zones
  - different traffic light configurations to reduce total emissions
  - effect on traffic safety of construction zones and lanes closings through safety surrogate measures
  - optimize public transport for greater efficiency and better access to city center

# You will ...

- solve problems as a team
- gain hands-on experience with coding, simulations, and applying ML in relevant real-world scenarios
- have liberties to explore and try new stuff with the simulation

# Project details

- title: “Towards Sustainable Cities through Simulation”
- language: English
- duration: 6 months (preferably located in Mannheim)
- team size: 3 to 5
- prerequisites:
  - programming experience
- available to: M.Sc. Mannheim Master of Data Science (MMDS), Business Informatics
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