

## **Student Assistant Position: Simulation for Optimal Pickup Station Positioning GreenPickUp - Smart Route Planning for Sustainable Urban Logistics**

The Institute for Enterprise Systems (<https://www.uni-mannheim.de/ines/>) at the University of Mannheim combines the transfer of interdisciplinary basic research with industrial research and development projects.

We are seeking a motivated student to join our GreenPickUp project focusing on sustainable urban logistics. GreenPickUp aims to develop a decentralized delivery system that minimizes the carbon footprint of parcel delivery. By using electric vehicles to place mobile pickup stations across the city, the project seeks to reduce emissions and traffic throughput from individual door deliveries.

### **Key Responsibilities:**

- Collaborate with a multidisciplinary team to develop and refine simulation models for optimal positioning of mobile parcel pickup stations
- Generate synthetic data to simulate various urban logistics scenarios.
- Apply linear optimization techniques to determine the most efficient placement of GreenPickUps.
- Implement reinforcement learning algorithms to continuously improve the model's accuracy and efficiency.
- Test and validate simulation results to ensure practical applicability.
- Document research findings and contribute to academic publications and presentations.

### **Qualifications:**

- Currently enrolled in a Bachelor's or Master's program in Business Informatics, Data Science, or a related field
- Strong programming skills in Python.
- Interest or prior experience in linear optimization and reinforcement learning is a plus.
- Familiarity with AI and simulation frameworks.
- Good communication skills and the ability to work effectively in a team.

### **Benefits:**

- Gain hands-on experience in cutting-edge AI and simulation technologies.
- Work on a project with real-world impact on urban sustainability.
- Collaborate with experts in the field and expand your professional network.
- Flexible working hours and a supportive research environment.

Join us in making city logistics more sustainable and efficient! If you are interested in this position, please apply with your resume and current transcript of records by email to **Nils Wilken** ([nils.wilken@uni-mannheim.de](mailto:nils.wilken@uni-mannheim.de)).