



BOSCH



Bosch Sicherheitssysteme GmbH and the Chair of Logistics and Supply Chain Management is looking for a qualified student from Technical University of Munich (TUM) for a **master's thesis** on the topic:

Explainable Artificial Intelligence for Setting Safety Stocks in Resilient Supply Chains Facing Supply Uncertainty

Bosch Building Technologies is a world leader in manufacturing products for safety, security and communication systems and offers in selected countries services for building security, energy efficiency and building automation. In the fiscal year 2021, Bosch Building Technologies reported revenue of more than €2 billion with a global workforce of 9,000 people playing a key role in providing intelligent building technologies that create a fascinating experience in public and commercial spaces.

Setting safety stocks in supply chains with massive supply uncertainties and disruptions should be supported by understandable, decision-tree-based methods including feature selection. The topic will be tailored to a real-world supply chain with available industry data.

Selected research tasks:

- Review relevant literature
- Collect and review relevant company data
- Develop, implement, and test tree-based machine learning algorithms
- Interpret and document results

Requirements:

Students of the master in Management and Technology with Business Analytics experience. Having attended the course inventory management and /or computational logistics would be a plus. The master's thesis can be carried out at **Bosch Building Technologies in Grasbrunn, Munich (Germany)**. A voluntary 3-month internship can be offered to obtain the necessary knowledge about the company and their processes. If you are interested, please send your application with your curriculum vitae and transcripts of records by email to

Begin: around April 2023

Advisor: Burakhan Sel

Application: Email with curriculum vitae and transcript of records to logtheses.log@mgt.tum.de