

Nagacharan Teja Tangirala

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SUMMARY

Looking to transition into an industry role to create a positive impact with my 8 years of expertise in research and development.

EXPERIENCE

Research Associate

Technical University of Munich

May 2021 – May 2024, Munich, Germany

- Led a team of three researchers in a simulation-based study of cargo fleet electrification consisting of 150 trucks.
- Designed and implemented the electric truck fleet behavior in traffic simulator CityMoS.
- Coordinated with the industry partners DHL and Siemens to harmonize real-world experiments with simulations.
- Supervised 12 student theses as part of their Bachelor's and Masters's courses.
- Prepared and submitted 4 research articles on Autonomous Fleets and Connected Vehicles simulations.

Research Engineer

TUMCREATE

December 2019 – May 2021, Singapore

- Developed synthetic trip generation module capable of generating >1 million trips for CityMoS traffic simulation.
- Conceptualized and implemented a taxi model in CityMoS to support simulations of >100000 taxis and private hire vehicles.
- Analyzed the energy requirements of a taxi fleet in Singapore with varying electrification rates.
- Assisted in comparative analysis of traffic simulators MATSim, SimMobility, VISSIM and CityMoS.

Research Engineer

Nanyang Technological University (NTU), Singapore

July 2017 – November 2019, Singapore

- Implemented network simulation module to carry out truck platooning simulation with 1000 vehicles.
- Published an article on the impact of channel crowding and packet loss on the truck platooning performance.
- Modeled e-bikes in the mobility simulation and developed scenarios to model their interactions with pedestrians.
- Completed 2 individual research projects and assisted 3 projects led by the rest of the team.

Software Engineer

November 2013 – June 2015, Bengaluru, India

- Saved 80% of the human time in multiple repetitive tasks through my automation solutions.
- Designated handler of scripting tasks because of my familiarity with programming languages.
- High performance within a short period led to an early promotion with best remarks.

EDUCATION

PhD (Ongoing)

Technical University of Munich (TUM) • Munich, Germany • 2026

- Ongoing PhD on AI applications in Connected Mobility simulations with 5G and Beyond.
- Google Scholar:

Master of Science in Automation and Control

National University of Singapore (NUS) • Singapore, Singapore • 2016 • 3.75/5.0

- Published a research article on the study of a mobile robot navigation method.

Bachelor of Engineering in Electrical and Electronics Engineering

SDM College of Engineering and Technology (SDMCET) • Dharwad, India • 2013 • 8.94/10

- Published a research article on simulation of controllers for AC Transmission.

SKILLS

Programming: Rust, C++, Python, Java

Simulators: CityMoS, SUMO, MATLAB, ns-3, OMNeT++