Small vehicles for autonomy platform.

Position Overview: As a Ph.D. candidate in the research team of Dr. Amr Alanwar at the Technical University of Munich – Heilbronn Campus, you will be at the forefront of developing methodologies and tools for ensuring the safety of complex and interconnected cyber-physical systems through reachability analysis, which computes the union of all possible trajectories a system can reach within a finite or infinite time when starting from a bounded set of initial states. By building and leveraging expertise in reachability analysis and formal verification techniques, you will contribute to creating novel approaches that guarantee the safety of cyber-physical systems, even in the face of uncertain and dynamic environments. You will have the chance to apply your developed techniques to the SVEA (Small VEhicles for Autonomy) platform designed for large-scale transportation experiments.

Qualifications:

- A Master's degree in computer science, electrical engineering, control systems, or a related field.
- Prior experience in reachability analysis, formal verification methods, control theory, or related domains.
- Proficiency in programming languages such as C++, Python, MATLAB, or similar.

Application Process: Interested candidates are invited to submit the following materials to alanwar@tum.de with email title "Ph.D. Position in Safety Verification"

1. CV detailing your academic and research achievements including contact information for at least two academic or professional references.
2. Cover letter outlining your motivation for applying and relevant experience.
3. Academic transcripts from your previous degrees.
4. Master thesis.