ASTRI
Smart Mobility - Senior Engineer / Engineer

Job Highlights

- Conduct R&D in Smart Mobility (V2X, T2X software)
- Research 5G V2X/T2X network & system architecture
- Design perception software architecture

Job Responsibilities:

- Conduct R&D in Vehicle-to-Everything (V2X) related areas, define requirements, specifications, and innovative design to contribute to ASTRI's V2X software system.
- Perform R&D on next generation V2X systems with in-vehicle interaction system, virtualised, cloud-based vehicle device and data management platform.
- Perform R&D on latest Vehicle-to-Everything (V2X) software system, with objective to deploy commercial trials and rollouts in the market in partnership with industry leaders in this area.
- Research and build up know-how and hands-on exp. in one of the following 4 areas:
    1. AI
        - V2X intelligent perception (including multi-modal sensor fusion, object tracking, event detection, etc.).
        - Data-driven V2X / traffic simulation.
        - Behavior modelling and cognitive AI in V2X systems.
        - Design and implementation of new patents in V2X related area.
    2. Frontend
        - Design and implement user-friendly web pages and mobile applications, ensure high quality graphic standards.
        - Developing features to enhance the user experience.
        - Striking a balance between functional and aesthetic design.
        - Optimize applications for maximum speed and scalability
        - Collaborate with back-end developers to improve usability
        - Get feedback from, and build solutions for, users and customers
    3. Backend
        - Design and develop backend components of V2X applications and services, ensuring high performance, scalability, and reliability.
        - Work with spatio-temporal databases, including designing and maintaining database schemas, optimizing queries, and ensuring data integrity.
        - Develop and maintain APIs for accessing and manipulating spatio-temporal data.
        - Design strong APIs that support mobile and desktop clients.
        - Collaborate with the front-end developers and other team members to set objectives and design robust, functional codes.
        - Ensure compliance with latest V2X standards and best practices for V2X data management, processing, and analysis
    4. Simulation
        - Designing and implementing V2X simulation software that model and simulate traffic elements, traffic patterns, transportation systems, infrastructure and different V2X scenarios.

- Designing and implementing data mining algorithms and statistical models to extract insights from large datasets from V2X system.
- Analyze simulation results to identify potential traffic safety and efficiency issues and propose solutions for improvement.
- Conduct performance testing and optimization of simulation models

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Requirements:

- PhD's holder or Master's degree in Computer Science, Electronic Engineering, Telecommunications or relevant discipline with minimum 3 years of related experience. Candidates with less experience may also be considered
- For applying the AI-related opening, candidates are expected to have sound knowledge and understanding in principles of machine-leaning, including neural networks, optimization methods, and statistical methods, as well as experience in at least one of the following programming languages: C++/C/Java/Python.
- For applying the Frontend-related opening, candidates are expected to have experience with modern frontend frameworks and libraries such as React and Vue.js, and knowledge of responsive design principles and cross-browser & cross platform compatibility issues.
- For applying the Backend-related opening, candidates are expected to have solid experience in Java and its ecosystem (including frameworks like Spring Boot, OSGi, Hibernate, and Java EE), web services and APIs (such as REST, gRPC, WebSockets, MQTT*).*
- For applying the Simulation-related opening, candidates are expected to be familiar with simulation tools such as SUMO, CARLA, NS-3.
- Good command of both written/spoken English and Chinese (including Putonghua)
- Live ASTRI values