

PERSONAL DETAILS

Birth July 04, 2000
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WORK EXPERIENCE

Master Thesis Student

Feb 2025 – Present, Full-time

Volvo Cars, Sweden

Developing an AI-based agent to optimize test case execution and automate test generation.
Key contributions: LLM fine-tuning, RAG implementation, data collection, and integration into HIL testing with CI pipeline evaluation.

Software Developer Intern

Sep 2024 – Feb 2025, Full-time

Volvo Cars, Sweden

Maintained the HIL (Hardware-in-the-Loop) CI testing environment and developed tools to support testers.
Key contributions: Implemented Appium, Simulink, SomeIP, and Git-related utilities; optimized ECU validation and system-level test cases, focusing on DHU (Domain Hub Unit) and CSD (Central Stack Display) related developing.

Software Developer Intern

Apr/2024 - Jun/2024, Parttime

Factorise Solutions, Denmark

Front-end related developer tasks concerning the core products: GenAI Chatbot, Learning Platform and Investment Community

Low-voltage Service Engineer Intern

Oct/2021 - Jun/2022, Fulltime

Tesla (R&D Center), China

Developed Python scripts for low voltage system diagnosis, analyzed vehicle controller failures (Model 3/Y), built an LV control system test bench, and assisted in new product development using CMOS sensors to enhance system reliability and performance for electric vehicles (Model 3, Y, X).

Autonomous Driving System Engineer Intern

Sep/2021 - Nov/2021, Fulltime

Hikvision, China

Contributed to the design, development, and testing of an automated parking system, including hardware analysis (cameras, radar sensors), PCB design assistance, visual calibration, environmental detection programming, 3D image generation testing, camera signal transmission principles, and system condition monitoring/version updates via Serial and CAN tools.

EDUCATION

MSc. Informatics

Department of Informatics, University of Zurich

Sep.2022 - present

BSc. Electrical and Computer Engineering

Department of Electrical Engineering, Xiamen University

Sep.2018 - June.2022

CERTIFICATIONS

Front-End Developer Professional Certificate

Meta

Certified in 2024

PROJECT

Game Website Fullstack Development

Semester Project

Served as Full Stack Developer, with expertise in React (frontend), Spring Boot (backend), and PostgreSQL (database). Developed RESTful APIs and integrated Stomp.js for real-time communication.

Feb/2024 - Apr/2024

CitizenOS frontend Development

Master Project ([CitizenOS Dev ¹](https://d3-deliberate.ifi.uzh.ch/en))

Constructed with Angular, this project involved web development techniques to create intuitive and engaging user interfaces, leveraging CSS strategies and JavaScript functionalities for enhanced usability. Integrated CI/CD workflows to automate testing, building, and deployment processes.

Oct/2023 - Apr/2024

SKILLS

Languages

Good in speaking and writing English

Programming

- Knowledge in electrical and electronic engineering and machine learning, interested in IOT, decentralized federal learning and embedded system.
- Proficient in software and hardware programming: Java, Python, C, C++, JavaScript, Typescript, HTML, CSS, PostgreSQL, NoSQL
- Experienced with **HIL testing, SomeIP protocol, Appium, React, Angular, Spring, and Django**
- Familiar with Continuous Integration/Continuous Deployment (CI/CD) processes and version control using Git
- Skilled in **object-oriented programming** and committed to maintaining clean code principles

¹<https://d3-deliberate.ifi.uzh.ch/en>

PUBLICATION

Yecong Cao; Congzhe Gao; **Zihan Liu**; Jing Liu; Mingshi Liu, “Research on Scheduling Strategy of Electric Vehicle Fast Charging Station Combined with Photovoltaic Generation and Energy Storage”, 2021 3rd International Conference on Information Science, Electrical and Automation Engineering