

Education

Carnegie Mellon University, School of Computer Science

Pittsburgh, PA

Master of Science in Computer Science

December 2022

- Coursework: Intro to Computer Systems; Current: Distributed Systems, Machine Learning, Probability and Statistics

Esslingen University of Applied Sciences

Esslingen, Germany (Stuttgart Area)

Bachelor of Engineering in Mechatronics | Grade: 1.0, Scale: 1.0 – 5.0, Top 1%

February 2021

- Degree concentration: Software Engineering and Networking
- Year abroad at UC Berkeley (August 2019 – May 2020)
- Coursework: Data Structures and Algorithms, Advanced Algorithms, Software Engineering, Systems Programming, Networking, Artificial Intelligence, Web Technologies, Embedded Systems, Real-Time Operating Systems

Skills

Programming Languages: Python, C/C++, Java, JavaScript, PHP, HTML, CSS, Go (currently learning in Distributed Systems)

Software Tools and Technologies: AWS, Linux, Git, Docker, SQL and NoSQL, HTTP, MQTT, FastAPI, Pandas, Spark, Grafana

Mechatronics: IoT and Embedded Systems, Sensors and Actuators, Raspberry Pi, Arduino, LabView, Matlab, CAD, 3D Printing

Experience

FARO Technologies

Korntal-Münchingen, Germany (Stuttgart Area, remote)

Junior Software Engineer

March 2021 – July 2021

- Architected, implemented from scratch, and maintained an entire IoT cloud backend for digital twin representation of vehicle manufacturing processes using AWS (IoT Core, Kinesis Streams, Lambda, S3, EC2, Docker, InfluxDB, Grafana), backend now used as central piece of infrastructure for research project with two universities and multiple companies
- Developed a database API in Python using FastAPI and deployed containerized tech stack via Docker-Compose on EC2
- Presented progress in bi-weekly project meetings in front of 20+ people, hosted architecture review sessions with AWS

Porsche

Weissach, Germany (Stuttgart Area, partially remote)

Autonomous Driving Research Intern

August 2020 – February 2021

- Researched programmatic labeling functions for detecting specific driving scenarios (cut-ins) in recorded sensor data, speeding up data labeling effort by 90% in experiments, resulted in a 50-page research thesis and paper submission
- Developed a framework including unit tests for temporal overlap analysis of driving scenarios using Python

Bosch

Sunnyvale, CA

Software Engineering Intern

February 2019 – August 2019

- Designed and implemented an entire serverless cloud backend for 500+ agricultural IoT devices on AWS from scratch (API Gateway, S3, Python and NodeJS Lambda, PostgreSQL RDS), which ran in production 24/7 for 9 months
- Independently deployed BLE sensors and self-developed 4G gateway prototypes in fruit orchards throughout California
- Set up Grafana dashboards and containerized AWS ECS deployment, constantly discussing design with key customers

Elero

Schlierbach, Germany (Stuttgart Area)

Embedded Software Engineering Intern

July 2018 – December 2018

- Developed an internal tool for visualizing the speed of electric motors during ramp-up (software and hardware) using C++ running on an STM32 ARM-based microcontroller, utilizing various peripherals (timers, ADC and DAC, UART)

Lanco Integrated

Hong Kong, China

Robotics Engineering Intern

August 2016 – February 2017

- Collaborated within a team of 20+ engineers across cultural and language barriers to automate an airline's catering
- Wired and programmed two pick-and-place robot stations from scratch, running in production since March 2017

Festo

Esslingen, Germany (Stuttgart Area)

Mechatronics Engineering Apprenticeship

September 2013 – July 2016

- Completed three-year full-time vocational training in the field of mechatronics covering machining (manual and CNC), machine components and design, electric circuits, electronics, PLC and robot programming, and industrial automation