Xiaotian Fang

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EDUCATION

University of Washington   Seattle, WA
M.S. in Electrical & Computer Engineering   *Sep 2021 - Mar 2023 (expected)*

ShanghaiTech University   Shanghai, China
B.E. in Electronic Information Engineering   *Sep 2016 - June 2020*
GPA: 3.53/4.00. Scholarship of Academic Excellence 2017

EXPERIENCE

Inceptio Technology (Auto Truck)   Shanghai, China
Software Engineer Intern, Perception Algorithm and Engineering   *Apr 2021 - Aug 2021*

- Developed face and lane **detection** functions in DMS and ADAS, with **Pytorch** in model training and **NCNN** in engineering deployment. Responsible for their performance, updated and improved in every version release cycle.
- Participated in models **migration** to embedded platform with **NPU**. Compressed neural network models for deployment by **pruning**, **quantization**, and **distillation**. Achieved a satisfied performance in accuracy and speed.
- Led the development of **CI/CD** platform and built a complete QA regulation for DMS(Driver Monitor System) project. Constructed regression pipelines for daily release of **x86** version and weekly release of **Arm** version.

NIO (Electric Automobile)   Shanghai, China
Software Engineer Intern, Automation Test Software Development   *Nov 2020 - Mar 2021*

- Participated in CGW (Central Gate Way) simulation platform building. Responsible for CAN, LIN communication parts by deploying **PCAN** with **Arduino**, configuring **cantools** on testbeds and writing **pytest** scripts.
- Developed the CI/CD platform for CGW project. Built regression pipelines for **all** vehicle models of NIO in **Jenkins Groovy**, and deployed **Grafana** on testbed ports to monitor system activities.

ShanghaiTech Automation and Robotics Center   Shanghai, China
Research Assistant   *Jul 2020 - Oct 2020*

- Conducted independent research in **SLAM** (motion estimation) and **optimal control** (traffic coordination).
- Software development for unified testing of SLAM performance. Integrated evaluating environments with **VNC** and **SSH** ports into **docker** images. Developed a web application to manage images with framework of **Flask Web**. Utilized **Javascript** and **SQLAIChemy** in front-end and database.

PROJECTS

Todoos: a Web Application to manage to-do list   *Jun 2021*

- Chose **React** as front-end framework, JavaScript and **Bootstrap** for logical process and layout design of website.
- Utilized **Spring Boot** as REST API framework. Configured **JWT** in Spring Security to enable user login and out.
- Incorporated **JPA** and **Hibernate** to operate database. Hosted website in **AWS** through **EC2** service.

Pintos: a simple operating system   *Mar 2021*

- Extended kernel **threads** functionality by implementing **priority** scheduling and an advanced **scheduler**.
- Implemented **argument passing** and **system calls** to Strengthen I/O support and interactivity of user program.
- Added **virtual** memory. Improved file system by adding **buffer caches** and making directories **hierarchical**.

SKILLS

Languages : proficient: Python, C/C++. skilled: Java, Golang.

Web : JavaScript, React, Spring Boot, Bootstrap, JWT, JPA, Jenkins, Groovy, MySQL, AWS.

MLE : Pytorch, Tensorflow, ONNX, NCNN, Caffe, CUDA, ROS, OpenCV.

Tools : Git, Docker, SSH, Confluence, Jira.