Shao-Hung (Tom) Chiu

• ms0705718@gmail.com • (412) 889-1745 • https://tomchiu5566.github.io/

WORK EXPERIENCE

Latitude AI, *Pittsburgh, PA*
Software Engineer *Feb. 2023 – Now.*

- Developed Click CLI tool in Python to build and upload autonomy application artifacts and manifests to JFrog Artifactory.
- Developed Python offboard package cache server to fetch and cache artifacts and manifests for the onboard software update agent.
- Developed C++ onboard applications and ansible playbooks to support configuration management and software updates for Ford's hands-free and eyes-off L3 fleet operations.
- Integrated software update workflow on Python Procedural Test Frameworks (PTF) for automated bench fleet that runs hundreds of end-to-end autonomy health tests every day.
- Designed and supported bringup for generations of the vehicle platform from the software update perspective.
- Built Bazel rules to manage GCC toolchain and sysroot libraries for both ARM64 and X86 architecture to enable hermetic builds for executables.

Argo AI, *Pittsburgh, PA*
Software Engineer *Jan. 2021 – Feb. 2023*

- Built the production-intent deployment software infrastructure in Python and C++ to support hundreds of fleet operations on daily basis.
- Delivered features of legacy tooling in Python, Rust, and salt, and work across-functionally on platform reliability, which is essential for fleet operations and product readiness.
- Maintained the offboard deployment server which is integrated with Slack, Prometheus, PostgreSQL, S3, and AWS EKS to enable the deployment pipeline.

Technology for Effective and Efficient Learning (TEEL) Lab, *Pittsburgh, PA*
Intern *May. 2020 – Aug. 2020*

- Developed extended microservice features on Auto-Grading Service using Azure Front Door, Azure Kubernetes and Azure CI/CD Deployment Pipeline to ensure robustness of services
- Delivered Data Engineering course project introducing Apache Spark and Azure Databricks with contexts, reference documents, starter code and interactive project evaluation systems for college-level Computer Science education

ASPEED Technology Inc., *Hsinchu, Taiwan*
Intern *Jul. 2018 – Aug. 2018*

- Researched Super Resolution algorithms, assisted ASPEED to analyze and evaluate potential IP usage, and illustrated domain-specific algorithms and heterogeneous architecture by giving a talk to 30 staff members in ASPEED

SKILLS

Programming Languages: C/C++, Python
Databases: PostgreSQL, MySQL, HBase
Tools: Bazel, Linux OS, gRPC, Ansible, Docker

EDUCATION

Carnegie Mellon University, *Pittsburgh, PA*
Master of Science in Electrical and Computer Engineering *Aug. 2019 – Dec. 2020*

National Tsing Hua University, *Hsinchu, Taiwan*
Bachelor of Science in Electrical Engineering *Sep. 2015 – Jan. 2019*

ACADEMIC PROJECTS

Cloud Computing Projects, *Pittsburgh, PA*
Carnegie Mellon University *Jan. 2020 – May. 2020*

- Constructed full-stack Twitter recommendation systems based on 1TB Twitter data implemented by Spark, MySQL Database, and NoSQL Database
- Deployed cloud infrastructures using Infrastructure as Code such as Terraform to achieve efficient cloud service management

Self-Driving Car with Raspberry Pi, *Hsinchu, Taiwan*
National Tsing Hua University *Jan. 2018 – Jan. 2019*

- Developed a lane following algorithm achieving prompt controls up to 6 frames per seconds by utilizing OpenCV and NumPy polynomial functions with Python 3.5 and integrated into a system with XBEE, MobileNet, and positioning algorithms