

Tristan Lin

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EDUCATION

Carnegie Mellon University Aug. 2022 – Dec. 2023
Master of Science in Information Technology Pittsburgh, U.S.

Nanjing University Sep. 2018 – Jun. 2022
Bachelor of Engineering in Software Engineering | GPA: 4.37/5.0 Nanjing, China

Coursework: Software Engineering / Operating System / Data Structure & Algorithm Analysis / Design Patterns / Computer Organization & System Architecture / Cloud Computing / Web development / Database Management

Awards: Second-Class People's Scholarship, First Prize Taiwanese Student Scholarship

WORK EXPERIENCES

IoT and Cloud Solutions Team, Sercomm Jun. 2023 – Aug. 2023
Software Engineer intern Fremont, U.S.

- Built serverless microservice using Golang to integrate with AI and ML event search functionalities
- Designed and implemented optimized log mechanism, reduced **over 70%** of AWS CloudWatch log costs
- Built a system level ring buffer package to optimize logging microservice performance in production
- Developed deployment script based on AWS CloudFormation for **13** serverless microservices

Cloud and Smart Industries Group (CSIG), Tencent Jul. 2021 – Sep. 2021
Software Engineer intern Shenzhen, China

- Employed Next.js and SSR methods to refactor official website of Tencent Cloud, increasing SEO by **25%**
- Used Redux to handle state management of Tencent Cloud resource market system
- Engaged in optimizing release pipeline CI/CD process, and migrating partial old pipelines to new ones
- Built a timely message notifier for Tencent Cloud using Node.js and supported **10+** RD teams

Bing Map Team, Microsoft Jun. 2020 – Aug. 2020
Software Engineer intern Taipei, Taiwan

- Collaborated with a team of 8 using React.js to develop a dashboard system to monitor and visualize data
- Employed Microsoft Azure Cognitive Services and Computer Vision technologies to extract and identify license plate information of parking vehicles
- Designed and developed RESTful APIs with Java and PostgreSQL

SELECTED PROJECTS

Automatic Extendable Ring Buffer based Logger Jul. 2023 – Sep. 2023

- Designed a general logger using Golang and Logrus to handle **~1000logs/hr** throughput across **18** microservices
- Upgraded cloud features by integrating the logger with AWS CloudWatch and AWS Lambda
- Implemented buffer extension algorithm based on Golang built in append function strategy
- Handled system level memory allocation strategies, benchmarking **28%** optimization on memory copy avoidance

CMU Iris Moon Rover Mission Control System Aug. 2022 – Feb. 2023

- Responsible for integrating front-end system using React.js with TypeScript to improve system maintainability
- Completed system close out tasks of dashboard module of system
- Assisted in building monorepo package of types for the front-end codebase

Low-Code Web Application System, software engineering capstone Nov. 2021 – May. 2022

- Responsible for building a platform able to construct and produce web applications based on low-code practice
- Designed front-end UI of platform and developed editor module and user module of system using React.js
- Implemented CRDT algorithm using Yjs and WebGL to develop a synchronous engine for editor rendering tasks

Knowledge Graph Construction and Visualization System Sep. 2020 – May. 2021

- Developed a user-friendly UI using React.js, including formation and display of knowledge graphs using three.js
- Utilized Google Cloud ML to train data and realize the function of automatic intelligent answering

SKILLS

Programming Languages: C++, JavaScript, TypeScript, Golang, Java, Python

Frameworks and Libraries: React.js, Vue.js, Node.js, Express, Flask

Other: AWS, Google Cloud, Microsoft Azure, Shell, Git, HTML, CSS, SQL