Tristan Lin

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EDUCATION

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

Selected Course: Introduction to Software Engineering / Cloud Computing / Principles of Software Construction / Web Application Development / Introduction to Information Security / Software Reverse engineering /Introduction to Embedded Systems

Nanjing University   Sep. 2018 – Jun. 2022
Bachelor of Engineering in Software Engineering   Nanjing, China

Selected course: Introduction to Software Engineering / Operating System / Software Design Patterns
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%**
- Contributed to state management infrastructure library using TypeScript and Redux
- Built a message scheduler 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 Azure Computer Vision APIs 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 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 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
- Assisted in building monorepo package of types for the frontend codebase

Low-Code Web Application System, *software engineering capstone*   Nov. 2021 – May. 2022
- Implemented CRDT algorithm using Yjs and WebGL to develop a synchronous engine for editor rendering tasks
- Designed frontend UI of platform and developed the editor component using React.js

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: JavaScript, TypeScript, C++, Golang, Python, Java
Frameworks and Libraries: React.js, Vue.js, Node.js, Express, Flask
Other: AWS, Google Cloud, Microsoft Azure, Git, Webpack, HTML, CSS, SQL, Shell