Hsuan-Ling Lin

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EDUCATION

Rice University   Houston, TX
Master of Computer Science · GPA: 4.0/4.0   Expected Dec. 2022

National Tsing Hua University   Hsinchu, Taiwan
Master of Science in Communications Engineering · GPA: 3.96/4.3   July 2016

National Central University   Taoyuan, Taiwan
Bachelor of Science in Communications Engineering   June 2013

RELEVANT COURSEWORK

Web Development and Design · Introduction to Database Systems · Database System Implementation · Computer Algorithms · Computer Networks · Operating Systems · Computer Systems Architecture · Data Structure

WORK EXPERIENCE

Amazon.com, Inc.   Seattle, WA
Software Development Engineer Intern · Java · AWS   May 2022 - Aug. 2022
- Designed and implemented an **API as orchestrator using Java** to aggregate data to client for fraud prevention.
- Created a service by **AWS Lambda + API Gateway** and invoked an internal backend service in parallel for lower latency.
- Constructed the service infrastructure and pipeline by leveraging **AWS CDK infrastructure** eco-system.
- Monitored the performance of the API by emitting metrics and created dashboard in CloudWatch.

JKOPay Co. Ltd. (The most widely used mobile payment system in Taiwan)   Taipei, Taiwan
Backend Developer · Java · Python   July 2020 - June 2021
- Built e-ticketing server-side service from scratch using **Java Spring Boot, MyBatis, MySQL, Docker, and ELK stack**; responsible for **managing project** from initial documentation, database schema design, and implementation.
- Raised 17% coupon allowance rate and gained $3000+ revenue each month in coupon service by implementing instant-payback coupon by **Python Django framework, Redis Queue, Kafka, MySQL**.
- Developed a **content management system by Python Django** to create coupons and campaigns for marketing usage.

MediaTek Inc. (A global leading semiconductor and telecommunications company)   Taipei, Taiwan
Software Engineer · C · C++   Dec. 2016 - Dec. 2018
- **Won 2 times MStar Short Term Reward**, a recognition of top 3 outstanding employees in the Division per quarter.
- Improved video compression rate in Google AV1 c-model by 65% through implementing data compression algorithm.

PROJECTS

MyDB · C++ · Relational Database System   Jan. 2022 - Apr. 2022
- Built a relational database from scratch with implementing **LRU buffer manager**, and **B+-tree** for page management.
- Developed a **SQL compiler** and **RA optimizer** to support SQL semantic check and create optimal executable plans.
- Implemented a **two-phase multi-way merge sort** for sorting a file in the database system.

GotchaDev · Full Stack Web Development · ReactJS   Sep. 2021 - Mar. 2022
- Developed a social networking web application that users can register a new account or log in with third party authentications, display user feed, customize the profile, post and comment articles, and follow other users.
- Created the frontend user interface with **React and Redux**, realized client-server communication by **RESTful APIs**, implemented backend web services with **Node.js and MongoDB**, and using **Jest and Enzyme** for unit test.

Reliable File Transfer Protocol · C · C++ · Socket Programming   Feb. 2022 - Mar. 2022
- Designed a reliable file transfer protocol using **UDP** that using only **1MB** of memory to transmit files with any size.
- Built a robust protocol by designing smart ACK response, error detection, and re-transmission mechanisms.

PROFESSIONAL SKILLS

Programming	Python · Java · C++ · JavaScript · MySQL · NoSQL
Web Development	Django · Spring Boot · ReactJS · RESTful API · Node.js · Redis · Docker
Software Engineering	AWS Lambda · AWS API Gateway · AWS CDK · Git · Linux · JUnit Testing