

# Hsuan-Ling Lin

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## EDUCATION

### Rice University

Master of Computer Science · GPA: 4.0/4.0

Houston, TX

Expected Dec. 2022

### National Tsing Hua University

Master of Science in Communications Engineering · GPA: 3.96/4.3

Hsinchu, Taiwan

July 2016

### National Central University

Bachelor of Science in Communications Engineering

Taoyuan, Taiwan

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 - Amazon Payment Product

May 2022 - Aug. 2022

- Designed and implemented a **Risk Aggregator API using Java** for preventing fraud in fraud mitigation toolkit.
- Created a plugin by **AWS Lambda and API Gateway** for invoking an internal back-end service and aggregated the results for upstream client.
- Constructed the service infrastructure and pipeline by leveraging **AWS CDK infrastructure** eco-system.
- Monitoring the availability and performance of the API by creating time and error metrics and alarms.

### JKOPay Co. Ltd. (The most widely used mobile payment system in Taiwan)

Taipei, Taiwan

Backend Developer

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

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

Feb. 2022 - Apr. 2022

- Built a relational database from scratch with implementing **LRU buffer manager**, and **B+-tree** for page management.
- Built a **SQL compiler** and a **RA optimizer** to support SQL semantic check and generate optimal executable plans.

### 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 to handle unreliable network such as packet delay, drop, reorder, mangle, and duplicate.

## PROFESSIONAL SKILLS

### Programming

Python · Java · C/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