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EDUCATION

Carnegie Mellon University

Master of Science in Software Engineering

• Relevant coursework: Foundation of Software Engineering, Software Testing and Verification

Mountain View, CA

Sep 2023 - Dec 2024

National Cheng Kung University

Bachelor of Science in Computer Science and Information Engineering; GPA 3.83/4.3

Tainan, Taiwan

Sep 2018 - June 2022

WORK EXPERIENCE

Your Knowledge

Software Engineer

Remote

Dec. 2022 - Present

- Developed a custom WordPress theme using **PHP** and **TailwindCSS** for an online course website and deployed with the **Apache HTTP Server** on **Microsoft Azure**, featuring an no-code Website Editor for non-developers
- Refactored the frontend using **Next.js** and **Redux**, leading to a 25% improvement in site loading speeds and a seamless UX
- Utilized a **GraphQL** layer to allow frontend interactions with **MySQL** database, reducing 50% data over-fetching
- Integrated the **ECPAY API** for payment, logistic, and invoice services; adopted **Google Authentication** for user login

Nightingale AI.

Software Engineer

Tainan, Taiwan

July 2020 - Oct. 2022

- Led the frontend applications development in **React.js** framework to develop the **SPA** with **React Flux architecture**
- Developed a digital verification service using **React.js**, **FastAPI**, and **PostgreSQL** to digitize paper documents and expedite the application process, benefiting more than 100k students across 60+ universities in Taiwan annually
- Collaborated with designers to establish a reusable design system using **Chakra UI** and **Styled Components** for visualizing medical data, leading to a 30% increase in development speed and supported 100+ healthcare professionals during COVID-19
- Enhanced code quality by utilizing **ESLint**, **Prettier**, **Husky** and migrating the **JavaScript** codebase to **TypeScript**

AINimal

Software Engineer

Tainan, Taiwan

Oct. 2019 - Nov. 2022

- Designed and implemented a **graph convolution network-based recommendation system** for a dating app, achieving a significant 70% accuracy in recall score through meticulous cross-validation
- Constructed a data pipeline using **Numpy** and **Pandas**, including text and sentiment analysis to enhance data quality
- Built an analytical dashboard with **Apache ECharts** and **Matplotlib**, enabling the team to make data-driven decisions

PROJECTS

Emergency Social Network - Express based real-time chatting app

July 2023 - present

- Collaborated with a team of 5 using **Scrum** and **Kanban** methodologies to develop a real-time chatting app
- Led the development of **RESTful APIs** using **Express.js**, and implemented real-time connections using **WebSockets**
- Applied ES6 **OOP** features, with the **MVC pattern** and **SOLID principles** to design and build a maintainable system
- Incorporated **TypeORM** with **MongoDB**, ensuring type-safe DB interactions and streamlined data management
- Conducted unit testing with **Jest**, applying dependency injection with **SQLite** to prevent effects on the production database
- Applied the **Block Element Modifier (BEM)** methodology in frontend development to ensure a **modular CSS** approach

Arbitrage Gainer - Cryptocurrency Trading System

Sep. 2023 - present

- Developed a cryptocurrency arbitrage trading system using **F#** with **functional programming** paradigm
- Employed **C#**, **.NET**, and **Azure** cloud services to construct a robust, real-time data analysis platform
- Applied **MapReduce paradigm** and **Domain Driven Development** for data processing and code structuring

Eye Tracking App - Electron.js Powered Machine Learning Application

Sep. 2022 - Oct 2022

- Utilized **Electron.js** and **WebGazer.js** to create a cross-platform **desktop application** for eye-tracking analysis
- Researched on image detection focus on recognizing unique individuals using **ResNet-50**; integrated the model with pre-trained **object-detection model** in **TensorFlow.js** to enable machine learning capabilities and real-time usage

SKILLS

Programming Languages: TypeScript, JavaScript, Python, C/C++, Java, PHP, C#, Bash, SQL

Web Development: React.js, Vue.js, Express.js, Flask, Next.js, MongoDB, MySQL, Azure, AWS, Docker