

# Yu Tsung (Eric) Kuo

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## EDUCATION

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### 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

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### Your Knowledge

*Software Engineer*

Remote

Dec. 2022 - Present

- Developed a full-stack online course website with 2k users using **Next.js**, **TailwindCSS**, **MySQL**, **Wordpress**, **PHP** and **Slim Framework**, deployed with the **Apache HTTP Server** on **Microsoft Azure**
- Employed **Docker** and **Azure Kubernetes Services (AKS)** to implement a resilient deployment strategy within a **Kubernetes cluster**, integrating a streamlined **CI/CD pipeline** powered by **GitHub Actions**
- Utilized **Next.js** to enable **server-side rendering** in a **TypeScript-based web application**, while incorporating **latest App Router feature** and **React Server Components** for enhanced SEO and a **70% improvement in page loading speed**
- Leveraged **Redux** for **centralized state management** and applied essential middleware, including **Redux-Thunk**, **Redux-Persist**, and **Redux-Logger**, resulting in a 40% reduction in debugging time
- 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**

### Animal

*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

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### 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

### 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

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**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