# YIMIAN LIU

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## **EDUCATION**

Cornell University

Ithaca, NY, USA

M.Eng. in Electrical and Computer Engineering; GPA: 3.94/4.00

Aug. 2022 - Dec. 2023

Relevant coursework: Distributed Computing Principles, Embedded Operating System, Deep Learning, Machine Learning, Digital Systems Design Using Microcontrollers, Computer Vision, Computer Networks, UNIX Tools and Scripting

University of Liverpool

Liverpool, UK

B.Eng. in Electrical and Electronics (Honor Degree); GPA: 3.83/4.00

Sep. 2017 - July 2021

Relevant coursework: C/C++ Programming, Software Engineering, Image Processing, Neural Networks

### **SKILLS**

Languages: Python, C/C++, TypeScript/JavaScript, Java, HTML/CSS, PHP, Lua, Linux Bash, SQL, Assembly Technologies: Kubernetes, Docker, Nginx, Node, is, React, Sass, MongoDB, MySQL, Git, CI/CD, RESTful, AWS

#### WORK EXPERIENCE

Full Stack Developer

(Remote)

Elseware Capital Jan. 2024 - Present

- •Worked on the further development of a Commercial Real Estate trading platform, leveraging expertise in **ReactJS** (frontend), **Node.js** (back-end), and **MySQL** (database) to enhance system functionality and performance.
- •Implemented KYC (Know Your Customer) and KYB (Know Your Business) processes by integrating a third-party provider's **SDK** and **RESTful API**, thereby improving the platform's security framework and user verification mechanisms.
- •Collaborated closely with the backend development team of the Token Studio, facilitating its seamless integration with the trading platform's front-end, back-end, and database to support efficient digital asset management and trading.

## Front-End Developer Intern

New York, NY, USA (Remote)

Guzman Energy

July 2023 – Dec. 2023

- •Improved a trading index portal with **ReactJS**, **TypeScript**, and **Material-UI**, applying CSR for better user interaction.
- •Integrated Microsoft Azure 2FA into the trading portal, utilizing **OAuth2** and **JWT** for secure user login.
- •Leveraged Docker to containerize the applications and deployed them to AWS EC2 for efficient scaling.
- •Developed an AI Scribe App for **Android** and **iOS** using **React Native** from scratch, adhering the Figma designs provided by the UI team.
- •Collaborated with backend team, utilizing **RESTful API** and Bearer tokens for secure data management and user authentication.

## **PROJECTS**

## Full-Stack Development and Management of High-Traffic Web Services

Ithaca, NY, USA

Individual Project

April 2018 - Present

- Conceptualized, designed, and deployed various self-developed, purpose-specific websites and web services.
- •Employed advanced front-end technologies like Gatsby, **ReactJS**, **Sass**, Bootstrap, WebSocket, and **JQuery**, integrating GA4 for data-driven performance analytics.
- •Efficiently handled back-end services using a mix of Node.js, **Express**, Python **Flask**, and **PHP**, showing flexibility and adaptability across different programming environments and requirements.
- •Developed a widely-used Random Image API with **PHP**, **MySQL**, **Redis**, and CDN, achieving **over 100,000 visits per day**, highlighting capability in scaling web services.

#### Distributed, Linearizable, Sharded Key-Value Database

Ithaca, NY, USA

Course Project advised by Prof. Lorenzo Alvisi

March 2023 - May 2023

- Crafted a high-performance, sharded key-value store using Java, tailored for distributed environments.
- •Adapted and deployed the **Multi-Paxos** protocol, a key algorithm ensuring system resilience as long as a majority of servers are operational.
- •Refined system efficiency by transforming Multi-Paxos into a streamlined **Raft**-like protocol, reducing complexity while boosting performance.

#### **AWARDS**

•Machine Learning: Secured 2nd rank out of 55 in a Cornell in-class Kaggle competition by designing a highly accurate CNN model using Keras, with data preprocessing and ensembling techniques applied to a noisy MNIST dataset.