

Zh-Hao (Howard) Lin

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EDUCATION

Rice University - Houston, TX

Dec 2024 (expected)

- Master of Computer Science
- **Selected Courses:** Web Development and Design, Graduate Design and Analysis of Algorithms, Computer System Architecture, Operating Systems and Concurrent Programming

National Taiwan University of Science and Technology - Taipei, Taiwan

Sep 2018 - Jul 2022

- B.S. in Computer Science and Information Engineering

SKILLS

- **Languages:** Python, C#, C/C++, JavaScript, HTML, CSS, SQL, GraphQL, Swift, Java
- **Frameworks:** React, jQuery, Node.js, Express.js, OpenCV, Open3D, TensorFlow
- **Tools:** Elasticsearch, Grafana, Docker, Git, Cocos Creator, Xcode, GCP, Azure, MongoDB, Unity

WORK EXPERIENCE

Software Engineer Intern | Affekta LLC - Houston, TX

Jun 2024 - Aug 2024

- Developed an eLearning platform using **React**, **JavaScript**, and **Azure**, enhancing user experience through gamification features.
- Built a coding platform integrated with **Azure OpenAI API** and **Llama 3** Chatbot.
- Integrated **TensorFlow.js** for real-time expression recognition and Facial Action Units Detection, achieving an average response time of 43 ms.
- Implemented expression detection with a webcam in a **Unity game** for more immersive gameplay experiences.

Software Engineer Intern | Samurai Spirit Inc. - Taipei, Taiwan

Aug 2021 - Aug 2022

- Developed applications for data analysis and processing using **Python**, **C#**, and **C++**.
- Reduced data outliers by **90%** through advanced statistical and algorithmic techniques.
- Leveraged **Open3D API** for point cloud tasks, integrating with a custom-built C# and Python UI.

SELECTED PROJECTS

SnapLink - URL Shortening Service

Jan 2024 - May 2024

- Developed a URL shortening service, optimizing for high-traffic handling and rapid redirection.
- Engineered the backend using **Spring Boot**, leveraging **Redis** for caching and **GCP Bigtable** for scalable storage.
- Implementing **10+** API endpoints with functionalities such as short URL generation, Bulk API, user analytics.
- Built the front end with **React.js**, focusing on creating a seamless user experience for generating and managing shortened URLs.

Rice Cooker - Full Stack Web Development

Aug 2023 - Dec 2023

- Developed a social networking platform featuring registration, login, comments, and Google OAuth integration.
- Designed and implemented the front end using **React** and **Redux**, facilitating user interactions.
- Established client-server communication via **RESTful APIs** for efficient data exchange.
- Built the back end with **Node.js** and **Express.js**, and constructed user databases with **MongoDB**.
- Applied React Testing Library for unit testing, achieving **90%** code coverage.

Leetcode Notion Helper - iOS Application Development

Jul 2023 - present

- Created an **iOS app** to streamline the creation of LeetCode notes on Notion.
- Implemented functionality to fetch LeetCode question details, including names, tags, and descriptions by **GraphQL** and presented them using **SwiftUI**.
- Used a 3rd-party package, passing selected question details to Notion to create notes.
- Conducted API testing using **Postman**, ensuring endpoint query reliability.

EXTRACURRICULAR ACTIVITY

Innovation Game Design Competition

Jan 2021

- Directed a **four-person team** to a **first-place victory** in a competitive tech innovation challenge, honing project management and collaborative software development skills.