Shu-Wei Hsu

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EDUCATION

National Taiwan University   *Sept. 2018 – Dec. 2022*
Bachelor of Science in Electrical Engineering   *Taipei, Taiwan*
Total GPA: 3.73/4.3 (3.72/4.0)

RELEVANT COURSES

Computer Programming: B+, Linear Algebra: A-, Discrete Mathematics: A,
Probability and Statistics: B, Algorithm: A, Data Structures: A,
Machine Learning: A-, Introduction to Computer Networks: A+, Computer Architecture: A,
Web Programming: A+, Operating System: B-,
Electrical Engineering Lab (Embedded System): B, Electrical Engineering Lab (Networking and Multimedia): A

WORK EXPERIENCE

Frontend Engineer   *July 2022 – Present*
National Taiwan University, Office of Academic Affairs   *Taipei, Taiwan*

- Developed a brand new course selection system and course information website for NTU
- Reduced the Largest Contentful Paint time by 0.4 seconds and optimized performance structure scores of the website
- Improved user experience by taking part in the redesign of user flow and implementing new user interface
- Optimized the application's efficiency of data-fetching by exploiting the concept of stale-while-revalidate, a HTTP cache invalidation strategy

Software Engineer Intern   *Feb. 2022 – July 2022*
Kinetik Athlete   *Taipei, Taiwan*

- Implemented and designed features for the workout-tracking app for CrossFit athletes
- Built a cross-platform (iOS & Android) workout-displaying TV app in two months by React-Native and released in two CrossFit gyms in Taiwan
- Visualized user's historical workout data by designing and developing a new dashboard page
- Implemented a remote-controlling feature to help gym owners communicate with the TV app by mobile devices

RESEARCH EXPERIENCE

Undergraduate Research Assistant of Prof. Polly Huang   *Sept. 2022 – June 2023*
Network and System Lab, National Taiwan University   *Taipei, Taiwan*

System design of real-time and high-quality augmented reality applications for mobile devices

- Investigated system design strategies of augmented reality/virtual reality applications
- Simulated the augmented reality applications on mobile devices by leveraging RaspberryPi, ffmpeg, and Tensorflow

PROJECTS

NMLAB-SecurityCam ⬤   *May 2022 - June 2022*

A scalable and customizable security camera service with an auto alarm system

- Led the design of the system infrastructures and user flow
- Implemented Line Bot server using Nodejs to receive commands and interact with users
- Built frontend interface using React for users to review historical images captured by the camera
- Defined RESTful API specification and database schemas

NTUCourse Neo ⬤   *Nov. 2021 - June 2022*

A redesigned course-planning web service for students at National Taiwan University

- Assisted 2000+ students in course planning and gained 400+ registered users in a month
- Developed frontend user interfaces and efficient data-fetching logic by utilizing React, Nextjs
- Won the 2nd best team project of 2021-Fall Web Programming Course
- Preparing for becoming the official course information website of National Taiwan University

DS Tutor :octocat: *May 2021 - June 2021*

A data structure visualization tool for beginners in Data Structure

- Built the frontend interface for users to manipulate the data structures by vanilla JavaScript, HTML, CSS, and jQuery
- Designed and implemented the animation of the transformation of the data structures by TweenJS and EaselJS

VOLUNTEER EXPERIENCE & LEADERSHIP

Volunteer   *Sept. 2021 - Dec. 2021*

NTU International Companions for Learning Program

- Prepared weekly English courses with a international partner for students in the elementary school

Group Leader   *Sept. 2019 - Feb. 2020*

NTUKS Bear Volunteer Group

- Led a team of volunteers in designing science courses and activities for students in elementary school in remote areas

President   *Aug. 2019 - July 2020*

Kaohsiung Group Association of NTU

- Led committee members in sending college care packages to all freshman from Kaohsiung, Taiwan
- Organized a two-day freshman camp for 50 freshmen from Kaohsiung, Taiwan
- Held events for students in the club: Kaohsiung Week, Barbeque, and Winter Gift Exchange

TECHNICAL SKILLS

Programming Languages: C/C++, Python, Go, HTML, CSS, JavaScript, TypeScript
Web App Development: React, Redux, Nextjs, Express, GraphQL, Docker, PostgreSQL, MongoDB
Native App Development: React-Native