

# Chi-Sheng Liu

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## Education

### National Taiwan University (NTU)

B.S. IN ELECTRICAL ENGINEERING, MINOR IN COMPUTER SCIENCE AND INFORMATION ENGINEERING

Taipei, Taiwan

Sep. 2018 - Jan. 2023

- Overall GPA: 4.19/4.3 (top 6%), Dean's List Award x 1

## Technical Skills

<b>Programming</b>	Python, Javascript, Typescript, Golang, C/C++, Java, Shell Script, Rust
<b>Web Development</b>	HTML, CSS, React.js, Node.js, Express.js, Flask, GraphQL
<b>Database</b>	MySQL, SQLite, PostgreSQL, MongoDB, Redis
<b>Cloud Computing</b>	Kubernetes, Docker, Amazon Web Service, Google Cloud Platform, Traefik, Istio, Bigtable, client-go
<b>Tools</b>	Linux, Git, GitHub Actions, GitLab CI, Helm, Nginx, minikube

## Professional Experience

### Apache Software Foundation

Remote

COMMITTER, APACHE SUBMARINE

Feb. 2021 - Present

- Apache Submarine is a unified machine learning platform which allows users to run ML workloads in distributed system easily.
- Created Submarine Operator, a specialized Kubernetes custom resource controller facilitating seamless multi-tenancy functionality.
- Replaced Traefik with Istio to support service mesh.
- Fix various minor bugs such as the 404 error for the logo on the Submarine website.
- Trained 3 junior students to develop the project by teaching them contribution process and project structure.

## Projects

### VaccineReservationSystem [\[Github Link\]](#)

A COVID-19 VACCINE RESERVATION SYSTEM

May. 2022 - June 2022

- Architected a database schema for Google Bigtable, capable of accommodating up to 1,000,000 user data records.
- Used the Golang bigtable package to do the CRUD operations on Google Cloud Platform.
- Deployed the application on Google Kubernetes Engine (GKE) with an efficient auto-scaling configuration.

### Assuject [\[Github Link\]](#)

A TASK PROGRESS TRACKING SYSTEM, INSPIRED BY JIRA, TRELLO AND NOTION.

Oct. 2021 - Nov. 2021

- User can drag and drop task blocks between columns, add labels and assignees to tasks, etc.
- Created ER diagram and normalized table relations to ensure best practices when designing the database schema.
- Used Prisma ORM to simplify the interaction between PostgreSQL and GraphQL.

### Q&A DApp [\[Github Link\]](#)

DISTRIBUTED Q&A SYSTEM DEPLOYED ON ETHERNET

Dec. 2020 - Feb. 2021

- Anyone can pay to the smart contract to ask questions and anyone can answer questions. After the post is expired, the author of the answer that has the most upvotes will be awarded.
- Connect to the Metamask web3 object, use Solidity as the backend language, and deployed it on Ropsten testnet.

### NTUEE Course Website [\[Github Link\]](#)

COURSE PRE-SELECTION WEBSITE FOR THE DEPARTMENT OF ELECTRICAL ENGINEERING AT NATIONAL TAIWAN UNIVERSITY

Jul. 2020 - Dec. 2020

- The website is written in Javascript and the distribution algorithm is written in Python.
- Used Docker to simplify the deployment process.

### CampScoreboard [\[Github Link\]](#)

SCOREBOARD WEB APPLICATION FOR THE GAME "MONOPOLY" IN NTUEE ORIENTATION CAMP 2020

Jul. 2020 - Aug. 2020

- Realtime scoreboard web application backed by socket.io.
- Admin and NPCs can login and control the scores, status of spaces, special card effects, etc. The changes will be broadcasted to the frontend and trigger re-render.
- Stored sessions in Redis to make the app more responsive.