

Shang-Hung Shih

Software Engineer · Full-Stack Web Development and Machine Learning

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Education

National Taiwan University and Academia Sinica

Taipei, Taiwan

M.S. in Genome and Systems Biology Degree Program

Sep. 2018 - Jan. 2021

- Worked with Prof. Chien-Yu Chen who focus on Genomic AI application.
- Related courses: Data Structures and Algorithms, Database Management System, Biomedical Data Mining, NGS, Bioinformatics and Genomic Medicine, etc.

Chung Shan Medical University

Taichung, Taiwan

B.S. in Biomedical Sciences

Sep. 2014 - Jul. 2018

- Joined a Bioinformatic research team of Prof. Yu-Fan Liu which focus on NGS big data analysis.
- Related courses: Linear Algebra, Java Programming, Bioinformatics, etc.

Professional Experience

Software Engineer, Taiwan AILabs

Taipei, Taiwan

Typescript(ReactJS) / Node.js / Python(ML) / Neo4j / MongoDB / Docker / Kubernetes

Jan. 2020 - Present

- Built PubmedKB web app for entities relation visualization of NLP model result.
- Built proteomics data visualization for QCheck quality control web app.
- Developed signup system, variant table, DNA sequence viewer, and pedigree editor for TAIGenomics web app to help genetic analysis and diagnosis.
- Developed rule-based ACMG, ML-based v-score and inheritance pattern interpretation system for variant prioritization.
- Helped the algorithm team accelerate the processor build and deployment pipeline and reduced time by over 90%.

Software Engineer Intern, Taiwan AILabs

Taipei, Taiwan

Python / MySQL / Docker

Mar. 2019 - Dec. 2019

- Designed and built a variant annotator with multi-processing and MySQL to solve the inefficiency of traditional annotation tools for matching 4 million variants to databases with 9 billion data, reduced the annotation time by 58%, and shortened the time for a whole genome sample from 2 hours to 50 minutes.

M.S. student and Server Administrator, NTU

Taipei, Taiwan

Python(CNN) / MySQL

Sep. 2018 - Dec. 2020

- Constructed transcription factor binding profiles using deep learning.
- Performed 1498 whole genome sequencing data from Taiwan Biobank using Taiwania.

Side Projects and Honors

Moneyfire Mobile App

Taipei, Taiwan

Typescript(React Native, Next.js) / Firebase / AWS(Amplify)

Jul. 2021 - Present

- Develop a mobile application to help users track and manage asset growth.

1st place in PIXNET 6th Hackathon Final: Travel Tech (Travel Charger)

Taipei, Taiwan

Python / Neo4j / Docker

Aug. 2019 - Sep. 2019

- Used Pixnet articles for correlation analysis and IG post data for sentiment analysis to provide personalized attraction recommendation and trip planning. I was mainly responsible for building relation graph for attraction recommendation.

Skills

Programming Language

Python, TypeScript(ReactJS, Next.js, React Native, Node.js)

Others

Data Science, SQL(MySQL, SQLite), NoSQL(MongoDB), GQL(Neo4j), Git, Linux, Docker, Kubernetes