


SHU-CHUAN HSU

☎ +1 (979) 661-2067 ✉ leohsu714@gmail.com  [ShuChuan Hsu](#)  [leo880714](#)

Education

M.S. Rice University

Aug. 2022 – Dec. 2023 (Expected)

Master of Computer Science

Texas, United States

- Selected Courses: Graduate Algorithm, Computer System Architecture, Intro to Database System, Web Development

B.S. National Taiwan University (NTU)

Sep. 2017 – Jan. 2022

Department of Mechanical Engineering, GPA: 3.96/ 4.0, Ranking: 7/186 (4%)

Taipei, Taiwan

- Honors: 2020 Spring Dean's List
- Selected Courses: Data Structure and Advanced Programming, Algorithm, Computer Architecture, Machine Learning, Computer Vision, Introduction to Computer Networks

Skills

Programming: C++, Python, C#, JavaScript, MATLAB, Go, Verilog, Shell Scripting, HTML/CSS, L^AT_EX

Web Frameworks: React, Angular, Node.js, JQuery, Express, Bootstrap, Flask, MongoDB, PostgreSQL, Neo4j

Packages/Tools: OpenCV, PyTorch, Pandas, NumPy, Scikit Learn, GitHub, Git

Experience

AIU Lab, CITI, Academia Sinica

Jan 2021 – Jan. 2022

Research Assistant

Taipei, Taiwan

- Developed an **interactive web application** to allow online inferencing of our model and collect feedback from **100+ online users**.
- Embedded training data to desired space and reorganized **generation pipeline** to make training more robust.
- Designed a novel training method utilizing **cycle consistency** and **unsupervised learning** manner to train a **GAN** model aiming to retrieve genetic information from given images.

MediaTek

July 2021 – Sep 2021

Algorithm Intern

Hsinchu, Taiwan

- Created an **alpha-matte generating tool** for **reducing the time** of marking image ground truth by **50%**.
- Enhanced the **quality of matting pictures by 20%** in F2 score through self-designed pipeline.
- Designed a **matting algorithm** with the **self-supervised** training manner and achieved outstanding performance in both qualitative and quantitative tests **in real time**.

Test Research, Inc. (TRI)

July 2020 – Aug 2020

Software Engineer Intern

Taipei, Taiwan

- Developed an algorithm to de-noise and construct high-quality 3D structures taken from raw data of lidar detection. The algorithm serves as a pre-processing in detection defects of welding in printed circuit boards.

Selected Projects

Rice Book | *Full Stack, MongoDB, ExpressJs, ReactJs, NodeJs*

Sep 2022

- Constructed a facebook-like **web platform** supporting posts, comments, reactions features by **MERN stack** skills.

Personal Portfolio Website | *React, JavaScript, NodeJS, HTML/CSS*

Jun 2022

- Designed a personal web application using **React** and **JavaScript** as the front-end.
- Utilized **rss2json API** to request personal medium posts into **JSON** format.

Video Frame Interpolation | *Python*

Jun 2021

- Incorporated a **non-learning-based** network and a **deep-learning-based** network with warping techniques to interpolate intermediate frames.
- Awarded Second Prize in the final project competition associated with *MediaTek* among 15 teams.

Web Server | *Go*

Jun 2021

- Constructed a **secure web server** interpreting **HTTP request messages** and handling **concurrent requests**.

Publication

- "KinStyle: A Strong Baseline Photorealistic Kinship Face Synthesis with An Optimized StyleGAN Encoder", Asian Conference on Computer Vision 2022.
- "Kinship Face Synthesis Evaluation Website with Gamified Mechanism", IEEE International Conference on Multimedia and Expo 2022.
- "StyleDNA: A High-Fidelity Age and Gender Aware Kinship Face Synthesizer", IEEE International Conference on Automatic Face and Gesture Recognition 2021.