Chien-Cheng Aaron Lai

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EDUCATION

Georgia Institute of Technology, GA	**Expected Aug 2022**
Master of Computer Science	GPA: 4.00/4.00
Rice University, TX	**Graduated Dec 2018**
Master of Chemical and Biomolecular Engineering	GPA: 3.46/4.00
National Cheng Kung University, Taiwan	**Graduated Jun 2015**
Bachelor of Chemical Engineering	

SKILLS

Programming & Language	Python, C/C++, Java, JavaScript, MySQL, JSON, R, MATLAB, HTML5/CSS
Framwork & Tools	Git, Docker, Flask, NodeJS, React, Redux, Stripe, GCP

PROJECTS

Email Survey Website — Oct 2021 - Nov 2021
- Developed a web that user can send bunch emails to collect feedbacks using **NodeJS** with **React** and **Redux**.
- Developed backend to handle tabulation feedbacks using **Express** and **MongoDB.**
- Implement website payment using **Stripe** and user sign-up with **Google OAuth.**

Job Offer Comparison Application — Aug 2021 - Nov 2021
- Designed the application flow and defined all APIs by **UML**.
- Developed backend logics to processed user data and product information using **Java**.
- Designed and integrated UI frontend interface (GUI) using **Android Studio**.

Multi-Threaded gRPC and Distributed File Systems (DFS) — May 2021 - Jul 2021
- Designed and implemented a distributed file system using **C++ gRPC** and **Protocol Buffer**.
- Implemented multiple threads to manage gRPC asynchronous callbacks and requests.

Shared Memory-Based Inter-Process Communication (IPC) — May 2021 - Jul 2021
- Implemented a cache server to communicate with a proxy server by **POSIX share memory API**.
- Utilized semaphores for file transfer and message queues for server communication.

Sales Report System Web Service — Jan 2021 - May 2021
- Designed the database schema by the **EER-Relational** Mapping and implement it with **MySQL**
- Developed backend logics to process data from database using **python Flask**.
- Created frontend interface to visualize analytical reports with **HTML/CSS** and **Bootstrap**.

SuppliesMapForCov19 — Mar 2019
- Developed a map website that users can offer and request supplies on Google Map using Flask, HTML/CSS/JS, Google Map JavaScript API, GCP Firestore, GCP App Engine.

Computer Vision — Jan 2018 - May 2018
- Built **SIFT** and **SURF** detecting features algorithm to matching visual objects for image transformation and deformation using **MATLAB**.

WORK EXPERIENCE

Formosa Plastics Corp., Testengeer, Inc.

Chemical Engineer — **Mar 2019 - Present**
- Developed functions to control instrument testing bias and variance for XRD, FIIR, DSC, HPLC.
- Developed functions to re-login the samples with multiple duplicate information and save 50% re-login time.
- Visualized and analyzed testing data in Total Quality Management Systems database using **NumPy** and **Pandas**.

Applied Optoelectronics, Inc.

Engineering Intern — **Jun 2018 – Aug 2018**
- Developed functions to track product process, testing data, and instrument information by Microsoft SQL Server.
- Developed functions to analyzed testing results of failure devices and overdue work orders.