Chih Chin Tsai

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Education

Texas A&M University , College Station, Texas, USA Jan. 2020 – Apr. 2022 (expected)

M.S. in Computer Engineering. GPA: **4.0/4.0**

National Cheng Kung University, Tainan, Taiwan Sep. 2010 – June 2014

B.S. in Chemical Engineering. GPA: **3.5/4.0**

Skills

- Programming Languages: Python, Java, JavaScript, Node.js, CSS, HTML5
- Platform: Django, Express, jQuery, React.js & Redux, MySQL, PostgreSQL, Ubuntu, Google App Engine

Projects

Student's Profile Tracking System Project Mar. 2020 – May. 2020

Developed a tracking system for CS department staff members to record students' profiles

- Adapted **Agile development** style and successfully achieved all the customer requirements **within 3 months**
- Deployed a production web on **Google App Engine** in conjunction with **MySQL** in **Ubuntu** environment
- Implemented **Cloud Drive**, **CSV Parser**, and **User Authentication** based on customer feedbacks
- Used Django **Model, View, Template (MVT)** structure to connect frontend with backend
- URL: `https://lateral-insight-272819.appspot.com`

Full Stack Facial Recognition App Apr. 2020 – June. 2020

Applied **clarifai face detection api** to locate the human faces of an image link uploaded by users

- Completed the frontend with **React.js** to display an interactive UI in reusable components manner
- Employed **Express.js** and **PostgreSQL** to serve the backend and followed **RESTful API** design pattern
- Deployed the project on Heroku URL: `https://smart-brain3344.herokuapp.com`

RoboFriends React.js App Apr. 2020 – June. 2020

Built a web app to fetch RoboHash Web Service for creating robofriends using **window.fetch** - AJAX technique

- Applied **Redux** package to simplify web application's state management system
- URL: `https://cctsai-tony.github.io/robofriends`

RosenBrock Optimization Project Mar. 2020 – May. 2020

Used python to build a mathematical modeling problem of RosenBrock function

- Refactored a given source code into a Python **OOD** package and built a test suite using **PyTest**
- Reduced the math model code's runtime from **216ms to 13ms** (10 times faster) via **refactoring**
- Utilized **Matplotlib** to visualize **searching-the-minimum** process in 2D map - plotted the search curves
- URL: `https://github.com/CCTSAI-Tony/CSCE689_FINAL_PROJECT`

Work Experience

TSMC inc. Hsinchu, Taiwan Aug. 2016 – Nov. 2019

Full time process engineer

- Developed Cu/Al process flow and improved **yield rate** of Microelectromechanical system (MEMS) product to **98 %**. Used correlation tools to analyze charts like scatter plot, histogram to inspect product's quality
- Tuned up a validate software to detect weak patterns from reticle's layout. Expected to improve the yield loss from **5 % to be less than 1 %** and set up a new rule for reticle layout design