



# CHIAO LUN HSU

chiaolunhsu.com  
 github.com/chiao-TW

A dedicated, proactive and achievement-driven Software Developer specialized in web application. Experience in designing a backend design for solving engineering problems. Check out my portfolio website to see my relevant works and blogs.

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## TECH STACKS

Programming Language	Backend	Frontend	DevOps
<ul style="list-style-type: none"><li>- Python</li><li>- JavaScript</li><li>- Matlab</li><li>- (C++, Pascal)</li></ul>	<ul style="list-style-type: none"><li>- Python frameworks: Flask, Django</li><li>- Database: MongoDB, Postgres</li><li>- Version Control: Git, Github</li><li>- API: Postman, Swagger</li></ul>	<ul style="list-style-type: none"><li>- HTML/CSS/JavaScript</li><li>- Bootstrap</li><li>- Data visualization (D3.js, chart.js, Matplotlib)</li><li>- Figma/Adobe Illustrator</li></ul>	<ul style="list-style-type: none"><li>- Container: Docker</li><li>- Deploy: Heroku, PythonAnywhere</li><li>- CI/CD: TravisCI</li><li>- Cloud service: AWS, DigitalOcean</li></ul>

## EXPERIENCES

### Digital Twin Intern – Tata Steel in Europe

2020.05 – 2020.08

- Designed a web-service application for coupling multiple steel manufacturing simulation models
  - Allowed users to enter the entire virtual factory across varies process models in a single entry point
  - Constructed the software architecture (the API, database, the connection to each model and the containerized system)
- Developed a RESTful API in **Python** connecting the clients, process models, and database
  - Implemented **C++** written models in Python by using **DLL** and **ctypes**
  - Created a **Flask** RESTful API and generalized the requests to make it easier to manipulate the application
  - Stored data in **MongoDB**, where the CRUD operations were implemented in Python with **pymongo** package
- Deployed a functional pilot software for the Digital Twin project
  - Tested the API with **Postman** and **Swagger**
  - Visualized the simulation results with MongoDB Compass and Matplotlib

### Teaching Assistant – TU Delft (Applied Numerical Mathematics)

2019.09 – 2019.11

- Taught numerical mathematic algorithm in **Matlab** and guided students to solve engineering problems

## EDUCATION

### Technische Universiteit Delft (TU Delft), Delft, The Netherlands

2018.09 – 2020.08

- MSc in Chemical Engineering

### National Taiwan University (NTU), Taipei, Taiwan

2012.09 – 2017.03

- BSc in Chemical Engineering