

Chi-Wei Hu

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EDUCATION

MS in Computer Science

University of Southern California (USC)

LA, United State | Sep. 2024-

MS in Biochemical Sciences

National Taiwan University (NTU)

Taipei, Taiwan | Sep.2020-July 2022

- GPA: 3.88/4.3
- Thesis: Engineering of A Multi-cell Type Immunotherapy Using synNotch-driven Macrophages

BS in Life Sciences

National Cheng Kung University (NCKU)

Tainan, Taiwan | Sep. 2017-July 2020

CS and Math-related Courses:

- Data Structure; Artificial Intelligence NCKU | 2024
- Web Development bootcamp Udemy | 2024
- Introduction to Bioinformatics; Introduction and Practice of Bio-databases (PHP, MySQL); Calculus; Biostatistics NCKU | 2017-2020

PROFESSIONAL EXPERIENCE

Software Engineer, Department of Computer-Integrated Manufacturing (CIM)

Strong Electro-Mechanical Co., Ltd.

Tainan, Taiwan | Sep. 2022-Sep. 2023

- Developed a Standalone Automation Process for etching machines in panel factory using C#, utilizing **SEMI Equipment Communication Standard (SECS) protocol** for device communication and improving process efficiency by **20%**.
- Built a monitoring system for the exposure machine in a panel factory using C++, facilitating communication with **Arduino or DAQ devices** and database integration in MySQL reducing downtime by **15%**.

Intern, Department of Computer-Integrated Manufacturing (CIM)

Jan. 2018, July-Aug. 2018

Strong Electro-Mechanical Co., Ltd.

- Gained experience in the development of a weighing software system for large-scale vehicles in C++, integrating data with **MySQL**.

Projects

Personal Portfolio Website – Independent Project

- Built a personal portfolio website designed with **HTML and CSS**, using **flask** in **python** as backend and **MongoDB** as database to store information. ([Link](#)) ([Github](#))

Movie Check Mobile App – Independent Project ([Link](#))

- Built a customized movie tracking app designed with **SwiftUI**, handling the **API** to fetch the latest information and media content of TV shows, and using **JavaScripts** to connect to **MySQL** database for storing and tracking viewing habits.

SKILLS

Languages: C#, C++, Python

Tools: MySQL, mongDB, RS-232/RS-485 Communication protocol, SEMI Equipment Communication Standard (SECS) Communication protocol, HTML, css

Framework: SwiftUI, JavaScripts, Flask

RESEARCH EXPERIENCE

Thesis: Engineering of a Multi-cell Type Immunotherapy using synNotch-driven macrophages | Advisor: Prof.

Steven Lin

Apr. 2022-June 2023

- Utilized **Lenti-transfection** to introduce the synNotch tool into macrophages and T cells, thoroughly assessing its functionality via **flow cytometry**
- Conducted **Ni-NTA protein purification** for cytotoxic antibodies and evaluated their cytotoxic ability against solid tumors by **ADCC cytotoxicity assay**. Investigate the potential impact on T and NK cells by **flow cytometry**.

Academia Sinica

Taipei, Taiwan

Research Intern, Institute of Biological Chemistry | Advisor: Prof. Steven Lin

July 2019-Aug. 2019

- Develop tools for editing mitochondrial DNA using **CRISPR gene editing technology**