

# Tomy (Chi-Wei) Hsieh

Incoming CMU MSE Student with Python, NLP experience  
and enthusiasm for user-centric design

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## Education

### Carnegie Mellon University (CMU)

Master of Software Engineering

May 2023 - Dec. 2024

Pittsburgh, PA

### National Chung Hsing University (NCHU)

Bachelor of Science in Computer Science

Sep. 2019 - Jun. 2022

Taichung, TW

- Related Courses: Algorithms, Information Retrieval, Data Mining, Machine Learning, Artificial Intelligent, Internet of Things

## Work Experience

### Software Engineer Internship

Intel Corporation, Chrome Team

Jul. 2021 - Dec. 2021

Taipei, TW

- The *Debug Agile System*
  - Developed and maintained the **Django** Full-stack website for test report visualization
  - Integrated with JIRA issue tracker for automating alarm and report
  - Rewrote and redesigned UI and received **over 85%** of the user satisfaction rate
- Machine Learning Engineering for *Canary Project*
  - Trained and deployed time series models for system failure detection with **sktime**
  - Improved model accuracy by applying data validation on the data pipeline with **Pydantic**
  - Increased usability by deploying and serving the models on a unified RESTful API platform with **FastAPI**

## Research Experience

### Research Assistant

Natural Language Processing Lab, NCHU

Jul. 2020 - Dec. 2021

Advisor: Yao-Chung Fan

Taichung, TW

- Capstone Project: *Question Generation Quality Enhancement based on **BART***
- **Honorable Mention** of Departmental Capstone Project Contest among 40+ contestants
- Researched specific use cases and characteristics of the **summarization** task
- Experimented with the difference between traditional and adapter-based fine-tuning

## Skills

Explore my complete skillset on the dedicated [Project](#) page

### Programming Languages

Python, C/C++, Java, JavaScript/TypeScript, Ruby, Bash

### Python

Flask, Django, FastAPI, Requests, BeautifulSoup, Scrapy

### Machine Learning

PyTorch, PyTorch Lightning, HuggingFace Transformers, sktime

### Frontend

HTML, CSS, Bootstrap, React, Next.js

### DevOps

Docker, Ansible, Terraform

### Cloud

Google Cloud, AWS, Vercel, Heroku, Netlify

### Web Server

Nginx, Apache, Caddy, Traefik

### Tools

Git, GNU Make, GitHub Actions

## Awards / Honors

- Special Award, 2020 LegalTech Hackathon: *Search Algorithm for Knowledge Graphed Verdict*
- Ranked **national top 2%** among other 2000+ competitors at the 2018 Collegiate Programming Examination (CPE)
- YZU school representative, 2018 ICPC Asia Taipei Regional Contestant

## Selected Projects

Explore more projects on my dedicated [Project](#) site

### Tube

- Developed an automated personal YouTube management platform with **Flask** and **PostgreSQL**
- Filtered favorite videos from 600+ new videos across 250 channels per day

### YZU CI Camp Website + Sen-Tree-Pay

- Designed the landing page and registration system for the event
- Developed a point system utilized by 300+ attendees with **Laravel** and **MySQL**

### Querator AI

- Created a web system for context-answer-based Question Generation with **React** and **Transformers**
- Reduced instructors' workload by more than 80% in the question-generation process

### Library Flow

- Collected people flow data with IoT devices scattered in the library
- Implemented crowd statistics visualization and trend prediction based on Bluetooth signal
- Gives readers a better understanding of the library's usage and helps the library to optimize its space

## Leadership & Extracurricular Activities

Listed in relevancy chronological order

### **YZU College of Informatics Orientation Camp**

*Chief Director of Event Planning / Full Stack Engineer*

- Conducted an annual event with over **300+ attendees**

### **AHSNCCU Pop Music Club**

*Event General Coordinator*

- Led a team of 5 to deliver a joint public presentation with three other clubs, attracting **1000+ audiences**

### **NCHU Drama Club**

*Equipment Manager / Executive Consultant*

- Provided technical support as well as strategic advice for club operations

### **PyCon DE & PyData Berlin 2022**

*Diversity sponsored volunteer / Session Chair*

### **Advanced Information Security Summer School (AIS3)**

*Cybersecurity Summer Event hosted by Ministry of Education of Taiwan,  
Selected National top 200 Trainee*

### **NTU Sprout program**

*High School Python Programming Selected Trainee*

**Jun. 2018 - Aug. 2018**

*Taoyuan, TW*

**Sep. 2015 - Jun. 2016**

*Taipei, TW*

**Sep. 2019 - Jun. 2022**

*Taichung, TW*

**Apr. 2022**

*Berlin, DE*

**Jul. 2020 - Aug. 2020**

*Taipei, TW*

**Mar. 2017 - Jul. 2017**

*Taipei, TW*