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)   May 2023 - Dec. 2024
Master of Software Engineering   *Pittsburgh, PA*
National Chung Hsing University (NCHU)   Sep. 2019 - Jun. 2022
Bachelor of Science in Computer Science   *Taichung, TW*
- Related Courses: Algorithms, Information Retrieval, Data Mining, Machine Learning, Artificial Intelligent, Internet of Things

Work Experience

Software Engineer Internship   Jul. 2021 - Dec. 2021
Intel Corporation, Chrome Team   *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 to by deploying and served the models on a unified RESTful API platform with **FastAPI**

Research Experience

Research Assistant   Jul. 2020 - Dec. 2021
Natural Language Processing Lab, NCHU   *Taichung, TW*
Advisor: Yao-Chung Fan
- 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

Tubee

- 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   Jun. 2018 - Aug. 2018

Chief Director of Event Planning / Full Stack Engineer   *Taoyuan, TW*

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

AHSNCCU Pop Music Club   Sep. 2015 - Jun. 2016

Event General Coordinator   *Taipei, TW*

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

NCHU Drama Club   Sep. 2019 - Jun. 2022

Equipment Manager / Executive Consultant   *Taichung, TW*

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

PyCon DE & PyData Berlin 2022   Apr. 2022

Diversity sponsored volunteer / Session Chair   *Berlin, DE*

Advanced Information Security Summer School (AIS3)   Jul. 2020 - Aug. 2020

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

NTU Sprout program   Mar. 2017 - Jul. 2017

High School Python Programming Selected Trainee   *Taipei, TW*