Tomy (Chi-Wei) Hsieh

Computer Science Graduate with NLP experience and enthusiasm for user-centric design

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Education

Carnegie Mellon University (CMU)
Sep. 2023 - Dec. 2024

Master of Software Engineering

Pittsburgh, PA

- Admitted student to commence degree of program later this year (Dates are listed for reference)

National Chung Hsing University (NCHU)
Sep. 2019 - Jun. 2022

Bachelor of Science in Computer Science

Taichung, TW

- Related Courses: Algorithms, Introduction to Information retrieval, Introduction to Data Mining and Machine Learning, Artificial Intelligent Internet of Things
- School representative for exchange to ECE Paris in Spring 2022 Semester

Yuan-Ze University (YZU)
Sep. 2017 - Aug. 2019

Completed Freshman & Sophomore Year Coursework

Taoyuan, TW

Majored in Computer Science

- Related Courses: Computer Programming, Web Programming, Discrete Mathematics, Data Structures, Linear Algebra
- School representative of Soochow University delegation member in 2018

Work Experience

Software Engineer Internship
Jul. 2021 - Dec. 2021

Intel Corporation, Client Computing Group, Chrome Team

Taipei, TW

- The *Debug Agile System*
  - Developed and maintained the Django Full-stack website for test report visualization
- Machine Learning Engineering for *Canary Project*
  - Studied and trained time series ML models for different test cases with sktime
  - Regularized and optimized the data pipeline to improve model accuracy
  - Deployed ML models on a unified platform as RESTful API with FastAPI

Research Experience

Research Assistant
Jul. 2020 - Dec. 2021

Natural Language Processing Lab, NCHU

Taichung, TW

Advisor: Yao-Chung Fan

- Independent Research
  - Focused on specific use cases and characteristics of the summarization task
  - Experimented with different training methodologies and practices
  - Capstone Project: **Question Generation Quality Enhancement based on BART**
  - Honorable Mention of Departmental Capstone Project Contest among 40+ contestants
- System Development
  - Designed and maintained a secure, scalable machine learning experiment runtime environment across 20+ on-premise servers
  - Created and maintained the NLP Lab API, a unified platform for NLP research and demonstration for the laboratory
  - Developed and maintained a Question Generation Platform, Querator AI, backed by the NLP Lab API

Awards / Honors

- Special Award, 2020 LegalTech Hackathon: *Search Algorithm for Knowledge Graphed Verdict*
- YZU school representative, 2018 ICPC Asia Taipei Regional Contestant
- Rank national top 2% among other 2000+ competitors at the 2018 Collegiate Programming Examination (CPE)
- Diversity sponsored attendee, PyConDE & PyData Berlin 2022

Skills

Explore my full skillset in the dedicated Project page

- Programming Languages
  - C/C++, Java
  - JavaScript, TypeScript, React
  - Python, Flask, PyTorch, PyTorch Lightning, Transformers
- DevOps
  - Docker, Ansible, Terraform
  - AWS, Google Cloud
- Misc
  - Shell/Bash, Git, Makefile
  - GitHub Actions, GitHub Flow, Agile Development

Projects

Explore my projects in the dedicated Project page

Tubee

- Developed an automated personal YouTube management platform
- Filtered favorite videos from 600+ new videos across 250 channels per day
- Built with Flask, PostgreSQL, Celery, Docker

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
- Built with Laravel, MySQL

Querator AI

- Created a web system for context-answer-based Question Generation with BERT
- Built with FastAPI, React, Docker

Library Flow

- Implemented crowd statistics visualization and trend prediction based on Bluetooth signal
- Collected people flow data with IoT devices scattered in the library
- Built with Raspberry Pi, FastAPI, PostgreSQL, Heroku

Extracurricular Activities

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

NTU Sprout program   **Mar. 2017 - Jul. 2017**

Selected Python Programming Trainee

YZU College of Informatics Orientation Camp   **Summer 2018**

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

- Conducted an annual event with over 300+ attendees

NCHU Drama Club   **Sep. 2019 - Jun. 2022**

Equipment Manager   *Taichung, TW*
Executive Consultant

- Provided technical support for the annual drama performance for three years

NCHU Public Address and Lightning Training Camp   **Feb. 2020**

Selected Trainee   *Taichung, TW*

PyCon DE & PyData Berlin 2022   **Apr. 2022**

Volunteer of Event Staff / Session Chair   *Berlin, DE*