Yan-Cheng (Bill) Hsu

| Personal Website:http://34.230.181.195/ | Gmail | LinkedIn | Github | Docker Hub | Google Scholar |

EDUCATION

M.S., *Computer Science*, UC San Diego — Dec. 2022
Courses: Recommender System & Web Mining, Graduate Network System, Computer Vision

B.S., *Electrical Engineering*, National Central University — 2017 – 2020
Related Courses: Data Structure, Algorithm, Operating System, Computer Organization — GPA: 3.97/4.00

SPECIALIZED SOFTWARE SKILLS

Programming Language: Golang, C/C++, Python, SQL/(PromQL), HTML/CSS/Javascript

Frameworks/Applications: AWS EC2, Docker, Git, CI/CD, TCP/HTTP, gRPC, Web Server, Nginx, Distributed System, Unit Test

U.S. INTERNSHIP EXPERIENCES

Software Dev Engineer Intern: Amazon LLC., U.S. — Jul. 2021 – Aug. 2021

ENGINEERING PROJECTS

CSE224 Network Systems — Feb. 2022 – Winter break. 2022

Project I: My Personal Website and File Sharing System (*HTML/CSS/Javascript, AWS EC2, Docker Compose, Nginx, Git, TCP/HTTP, Distributed System, gRPC, File System, Operating System, Golang Unit Test*)

- ✓ Designed and implemented a web server handling get requests and responses without the help of net/http package.
- ✓ Automatically deployed the web server to AWS EC2 instance through git and docker hub. website, github
- ✓ Designed and implemented a simple file sharing system (meta-service + block-service) that allows users to synchronize their file changes through gRPC.

CSE 258 Recommender System — Oct. 2021 – Dec. 2021

Project: Recommender System Rating Prediction (*Python, Tensorflow, Latent Factor Model*)

- ✓ Designed a latent factor rating prediction model with tensorflow and achieved top 5% (25/552) performance in the class.

FORMER INTERNSHIP EXPERIENCES

Software Engineer Intern: Wiwynn Inc (Acer's Child Company), Taipei.TW — Jul. 2021 – Aug. 2021

Prometheus Infrastructure Testing Data Analysis and Software Toolkit Development (*Python, SQL, Git, CI/CD, Python Unit Testing, Prometheus, Large Scale Database, Temporal Data Analysis*)

- ✓ Established and implemented a prototype data pipeline for production line testing data analysis
- ✓ Delivered 3 fully documented and unit-tested Python packages for collecting, aligning, and analyzing both temporal infrastructure's hardware data (Prometheus) and production line testing data in different databases
- ✓ Reduced and redefined the scope of production line performance enhancement problem to roughly 0.34x compared to the original

Research Assistant: MLBR Laboratory (National Central University), Taoyuan.TW — Dec. 2019 – Sep. 2020

Deep Neural Network Predictor by Introducing a new Feature Selection Algorithm (*Python, Tensorflow, CUDA, Pytorch, Statistics, Data Science, Artificial Intelligence*)

- ✓ Delivered and designed a deep learning blood pressure estimation model from scratch including temporal data preprocessing, neural network selection, and design of physiological feature selection algorithm with Mean Absolute Error (MAE) equal to 2.73 mmHg over 2.5M+ cardiac cycles collected from 9000 patients by introducing a new physiological feature selection algorithm
- ✓ Incorporated ~6x more data into the new model and made the model ~1.8x more accurate compared to the existing model
- ✓ Published 1st author work in an international journal *Sensors:*
  Hsu, Yan-Cheng; Li, Yung-Hui; Chang, Ching-Chun; Harfiya, Latifa N. 2020. "*Generalized Deep Neural Network Model for Cuffless Blood Pressure Estimation with Photoplethysmogram Signal Only*." *Sensors* 20, no. 19: 5668. doi, github

Software Research Intern: BioEE Laboratory, UCSD.US — July. 2019 – Aug. 2019