Yan-Cheng (Bill) Hsu

| Personal Website: https://d1nra9euuqyfpv.cloudfront.net | Gmail | LinkedIn | Github | Docker Hub | Google Scholar |

EDUCATION

M.S., *Computer Science*, UC San Diego — Dec. 2022
Courses: Network and Distributed System, Database System Implementation, Recommendation System, Natural Language Processing

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

SPECIALIZED SOFTWARE SKILLS

Programming Language: Python, Typescript, Golang, Javascript/CSS/HTML, C/C++

Frameworks: Node.js, React.js, Git, VersionSet, CI/CD, Pipeline, Docker, Nginx, gRPC, TCPIP/HTTP

AWS-CDK/AWS-SDK: EC2, Lambda, IAM, Bindle, Brass, CloudWatch Metrics and Alarms, S3, DynamoDB, Cloudfront, ACM

PROFESSIONAL EXPERIENCES

Software Dev Engineer Intern: Amazon, Alexa Org, SEA, U.S. — Jun. 2022 – Sep. 2022
Full-Stack Project: Sensai Self-Service Onboarding Platform (*Cyber Security Platform, Typescript, Node.js, Javascript/CSS/HTML, React.js, Git, VersionSet, CI/CD, Pipeline, AWS-CDK, AWS-SDK*) ***(Return Offered)***

- ✓ Deployed Sensai Self-service Onboarding system and saved 93.75% of onboarding time per APP/API (4 hrs/APP|API → 15 mins/APP|API) for *Alexa Org*. *pptx*
- ✓ Designed and implemented Auto-Verification, Canaries and Monitoring modules for Self-Service Onboarding System

Full-Stack Engineer: Self-Employed, CA, U.S. — Feb. 2022 – Now
Full-Stack Project: My Personal Websites (*Golang, HTML/CSS/Javascript, AWS EC2, Cloudfront, ACM, S3, Docker Compose, Nginx, Git, Distributed System, File System, AWS Serverless Framework*)

- ✓ Deployed my 1st website on AWS EC2 with Docker. *System Overview*, *github*
- ✓ Deployed my 2nd website with serverless framework and saved 90% of budget per month (50 USD/month → 5 USD/month). *System Overview*, *website*, *github*

Software Research Assistant: MLBR Laboratory (National Central University), Taoyuan.TW — Dec. 2019 – Sep. 2020
Cuffless Deep-Neural-Network Blood Pressure Predictor by Introducing a New Statistical Feature Selection Algorithm (*Python, Keras, Tensorflow, CUDA, Pytorch, Statistics, Algorithm, Data Science*)

- ✓ Delivered and designed a model from scratch that incorporated ~6x more data (2.5M+ vital sign records collected from 9000 patients) and achieved ~1.8x more accurate and state-of-the-art performance by introducing a new statistical algorithm
- ✓ **1st Author International Journal Publication: 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. *System Overview*, *doi*, *github*

SOFTWARE ENGINEERING PROJECTS

CSE132C Database Implementation — Feb. 2022 – Winter break. 2022
Project: Buffer Manager and B+ Tree (*C/C++, Clock Algorithm, B+ Tree, Backtracking, Binary Search*)

- ✓ Designed and implemented collaboratively a clock-algorithm-based buffer manager and a B+ Tree Indexing system with insert, split and range search functions for a file system. github

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

OTHER PROFESSIONAL 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, Prometheus*)

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