HAN-YUN(HENRY) YEH

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EDUCATION

Carnegie Mellon University **Mountain View, CA** *Feb. 2021 - Dec. 2022*
· M.S. in Software Engineering
Courses: Foundations of Software Engineering, Computer Systems, Software Verification and Testing

National Chiao Tung University **Hsinchu, Taiwan** *Sep. 2016 - June 2019*
· M.S. in Communications Engineering (GPA: 4.02/4.3)
Courses: Algorithms, Embedded Systems, Deep learning, Machine learning, Digital Speech Processing

National Taipei University **Taipei, Taiwan** *Sep. 2012 - June 2016*
· B.S. in Communications Engineering (Rank: 1st/33, GPA: 3.72/4.0)
Courses: Data structures, Network programming, Digital Signal Processing, Image Processing

WORK EXPERIENCE

Schlumberger **Digital Technology Intern** *May 2022 - Aug 2022*
· Deployed sample application on Kubernetes cluster, established pipeline to manage Docker and patch K8s, and integrated Observability tools including Grafana and Prometheus. Created tutorial to help developers migrating system and saved 50% learning time ⋆ *DevOps, Kubernetes, Prometheus, Grafana*

Novatek Microelectronics Corp. **Software Firmware Engineer** *Aug 2020 - June 2021*
· Integrated IC verification report generator in C embedded programming for audio/digital signal processor (DSP) part of latest SmartTV System on Chip (SoC) IC, saved 50% reporting time
· Optimized DTS sound effect algorithm in C embedded programming with Tensilia Hifi2/Hifi4 DSP processor, surpassed 4x speedup for audio processing

IBM, Inc **Application Developer/Intern** *June 2018 - Oct. 2018, Jul. 2017- Aug.2017*
· Designed a backend infrastructure to collect and analyze website users ⋆ *JavaScript, Python, PHP, MongoDB, MySQL, AWS*
· Implemented an automated optical inspection (AOI) algorithm to detect defects in circuit board labels, increasing accuracy to 90% ⋆ *Python, OpenCV*

COURSE PROJECT

· **Emergency Social Network** - Built a model view controller (MVC) structured web application using HTML5/CSS/JS with pug and Bootstrap for the front-end, Node.js with ExpressJS for the back-end, MongoDB for the database and deployed on Heroku. Experienced software engineering practices including scrum, design patterns, unit testing, CI/CD

RESEARCH EXPERIENCE

National Chiao Tung University **RA @ Speech Processing Lab** *Sep. 2016 - Jan. 2019*
· Developed Long Short-term memory (LSTM)/Seq2Seq/Transformer based Mandarin language model, published as my master thesis, achieved 5.6% character error rate (CER) ⋆ *Speech processing, Deep learning, TensorFlow, Python*
· Quantified LSTM based Dimensional sentiment analysis for Chinese phrases, reached 6th place ⋆ *NLP, Python*
· Established Child Speech Impairment Supporting System UI, collected 5+ hours child corpus ⋆ *Java*

National Taipei University **RA @ Signal Processing Lab** *Sep. 2012 - June 2016*
· Implemented Speech recognition system that featured energy-based voice activity detection and a beamforming noise cancellation module to enter student's grades automatically ⋆ *C, HTK*
· Surveyed Mandarin prosody generation using CRF-based base-phrase chunk features and punctuation confidence for Mandarin text to speech system ⋆ *C, CRF*

TECHNICAL SKILLS

Languages	Python, C, Java, Javascript, PHP
Web Technologies	Bootstrap, jQuery, Nodejs (Express), SQL, NoSQL, Grafana, Prometheus
Frameworks and Tools	TensorFlow, PyTorch, OpenCV , Git, Vim, Kubernetes, Docker, Azure