

HAN-YUN(HENRY) YEH

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EDUCATION

Carnegie Mellon University	Mountain View, CA	<i>Feb. 2021 - Dec. 2022</i>
· M.S. in Software Engineering		
Courses: Foundations of Software Engineering, Computer Systems, Software Verification and Testing		
National Chiao Tung University	Hsinchu, Taiwan	<i>Sep. 2016 - June 2019</i>
· 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	<i>Sep. 2012 - June 2016</i>
· B.S. in Communications Engineering (Rank: 1 st /33, GPA: 3.72/4.0)		
Courses: Data structures, Network programming, Digital Signal Processing, Image Processing		

WORK EXPERIENCE

Novatek Microelectronics Corp.	Software Firmware Engineer	<i>Aug 2020 - June 2021</i>
· 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 Tensilica Hifi2/Hifi4 DSP processor, surpassed 4x speedup for audio processing		
IBM, Inc	Application Developer/Intern	<i>June 2018 - Oct. 2018, Jul. 2017- Aug.2017</i>
· Constructed rule-based health information suggestions system using user's information from wearable devices and health knowledge from the internet ★ <i>Python</i>		
· Designed a backend infrastructure to collect and analyze website users ★ <i>JavaScript, Python, PHP, MongoDB, MySQL, AWS</i>		
· Implemented an automated optical inspection (AOI) algorithm to detect defects in circuit board labels, increasing accuracy to 90% ★ <i>Python, OpenCV</i>		

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	<i>Sep. 2016 - Jan. 2019</i>
· Developed Long Short-term memory (LSTM)/Seq2Seq/Transformer based Mandarin language model, published as my master thesis, achieved 5.6% character error rate (CER) ★ <i>Speech processing, Deep learning, TensorFlow, Python</i>		
· Quantified LSTM based Dimensional sentiment analysis for Chinese phrases, reached 6 th place ★ <i>NLP, Python</i>		
· Established Child Speech Impairment Supporting System UI, collected 5+ hours child corpus ★ <i>Java</i>		
National Taipei University	RA @ Signal Processing Lab	<i>Sep. 2012 - June 2016</i>
· Implemented Speech recognition system that featured energy-based voice activity detection and a beam-forming noise cancellation module to enter student's grades automatically ★ <i>C, HTK</i>		
· Surveyed Mandarin prosody generation using CRF-based base-phrase chunk features and punctuation confidence for Mandarin text to speech system ★ <i>C, CRF</i>		

TECHNICAL SKILLS

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