

# HAN-YUN(HENRY) YEH

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## EDUCATION

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<b>Carnegie Mellon University</b>	<b>Mountain View, CA</b>	<i>Feb. 2021 - Dec. 2022</i>
· M.S. in Software Engineering		
Courses: Foundations of Software Engineering, Computer Systems, Software Verification and Testing		
<b>National Chiao Tung University</b>	<b>Hsinchu, Taiwan</b>	<i>Sep. 2016 - June 2019</i>
· M.S. in Communications Engineering (GPA: 4.02/4.3)		
Courses: Algorithms, Embedded Systems, Deep learnings, Machine learnings, Digital Speech Processing		
<b>National Taipei University</b>	<b>Taipei, Taiwan</b>	<i>Sep. 2012 - June 2016</i>
· B.S. in Communications Engineering (Rank: 1 <sup>st</sup> , GPA: 3.72/4.0 )		
Courses: Data structures, Network programming, Digital Signal Processing, Image Processing		

## WORK EXPERIENCE

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<b>Novatek Microelectronics Corp.</b>	<b>Software Firmware Engineer</b>	<i>Aug 2020 - June 2021</i>
· Integrated IC verification report generator in C embedded programming for audio/DSP part of latest SmartTV 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		
<b>IBM, Inc</b>	<b>Application Developer/Intern</b>	<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 user behavior by means of JavaScript, Python, PHP, MongoDB, MySQL and deployed service on AWS		
· Implemented an automated optical inspection (AOI) algorithm to detect defects in circuit board labels, exceeded 90% accuracy ★ <i>Python, OpenCV</i>		

## COURSE PROJECT

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- **Emergency Social Network** - Built a MVC structured web application using HTML5/CSS/JS with pug and Bootstrap for the front-end, Node.js with ExpressJS for the backend, MongoDB for the database and deplyed on Heroku. Experienced software engineering practices including scrum, design pattern, unit testing, CI/CD

## RESEARCH EXPERIENCE

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<b>National Chiao Tung University</b>	<b>RA @ Speech Processing Lab</b>	<i>Sep. 2016 - Jan. 2019</i>
· Developed LSTM/Seq2Seq/Transformer based Mandarin pinyin to character language model, published as my master thesis, achieved 5.6% CER ★ <i>Speech processing, Deep learning, TensorFlow, Python</i>		
· Quantified LSTM based Dimensional sentiment analysis for Chinese phrases, reached 6 <sup>th</sup> place ★ <i>NLP, Python</i>		
· Established Child Speech Impairment Supporting System UI, collected 5+ hours child corpus ★ <i>Java</i>		
<b>National Taipei University</b>	<b>RA @ Signal Processing Lab</b>	<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 Madarin text to speech system ★ <i>C, CRF</i>		

## TECHNICAL SKILLS

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