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 (end-to-end web development)

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 learnings, Machine learnings, Digital Speech Processing

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

WORK EXPERIENCE

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

IBM, Inc **Application Developer** *June 2018 - Oct. 2018*
- Constructed rule-based health information suggestions system using user's information from wearable devices and health knowledge from the internet ⋆ *Python*
- Designed a backend infrastructure to collect and analyze website user behavior by means of JavaScript, Python, PHP, MongoDB, MySQL and deployed service on AWS

IBM, Inc **Application Developer Intern** *Jul. 2017 - Aug. 2017*
- Implemented an automated optical inspection (AOI) algorithm to detect defects in circuit board labels, exceeded 90% accuracy ⋆ *Python, OpenCV*

RESEARCH EXPERIENCE

National Chiao Tung University **RA @ Speech Processing Lab** *Sep. 2016 - Jan. 2019*
- Developed LSTM/Seq2Seq/Transformer based Mandarin pinyin to character language model, published as my master thesis, achieved 5.6% 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 beam-forming noise cancellation module to enter student's grades automatically ⋆ *C, HTK*
- Surveyed Mandarin prosody generation using CRF-based base-phrase chunk features and puctuation confidence for Madarin text to speech system ⋆ *C, CRF*

HONORS AND AWARDS

- **6th Place** (2017) - IJCNLP Shared Task 2: dimensional sentiment analysis for Chinese phrases - Taipei, Taiwan
- **1st Place** (2015) - NTPU CE Senior Project Competition - Taipei, Taiwan
- **Best Paper Award** (2014) - Oriental COCOSDA: Proposed CRF-based models for prosody generation used in text-to-speech system - Phuket, Thailand

TECHNICAL SKILLS

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