

HAN-YUN(HENRY) YEH

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EDUCATION

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| National Chiao Tung University | Hsinchu, Taiwan | <i>Sep. 2016 - June 2019</i> |
| <ul style="list-style-type: none">• M.S. in Communications Engineering (GPA: 4.02/4.3) | | |
| National Taipei University | Taipei, Taiwan | <i>Sep. 2012 - June 2016</i> |
| <ul style="list-style-type: none">• B.S. in Communications Engineering (Rank: 1st, GPA: 3.72/4.0) | | |

HONORS AND AWARDS

Academic

- **Phi Tau Phi Award** (2016) - The Phi Tau Phi Scholastic Honor Society, Taipei Taiwan
Award for top-ranked student in CE department among all classes
- **Dean's List** (Fall '12, Fall '15) - NTPU CE Dept. - Taipei, Taiwan
- **Scholarship** (2014) - Elytone Electronic CO., LTD. - Taipei, Taiwan
- **Honorable Mention** (2014) - Taiwan National Collegiate Programming Contest - Taipei, Taiwan
- **29th Place** (2014) - ACM ICPC Jarkarta Regional - Jarkarta Indonesia

Research

- **6th Place** (2017) - IJCNLP Shared Task 2 [3] - Taipei, Taiwan
- **Best Paper Award** (2014) - Oriental COCODA [4] - Phuket, Thailand
- **1st Place** (2015) - NTPU CE Senior Project Competition - Taipei, Taiwan

RESEARCH EXPERIENCE

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| National Chiao Tung University | Hsinchu, Taiwan |
| <i>Graduate Student/Research Assistant, Speech Processing Lab</i> | <i>Sep. 2016 - Jan. 2019</i> |
| <ul style="list-style-type: none">• Research Topic: Chinese language model [1]
Experimented sequence labeling (TDNN+BLSTM, joint learning with word boundary prediction) and seq2seq (Transformer) model on Chinese pinyin to character problem. Reduced character error rate to 5.6%.• Dimensional sentiment analysis for Chinese phrases (DSAP) [3]
Achieved mean rank 6.5 among 24 submissions on Chinese phrases' valence and arousal prediction problem using modified word2vec and BLSTM model.• Child Speech Impairment Supporting System
Implemented corpus recording system (for speech impairment child) GUI using Java, in the cooperation project with NTU Hospital Hsinchu. Collected and analyzed about 200 children's sample.• Managed information system and work station for research. *Arch Linux, Ubuntu... | |

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| National Taipei University | Taipei, Taiwan |
| <i>Research Assistant, Speech and Multimedia Signal Processing Lab</i> | <i>Sep. 2012 - June 2016</i> |
| <ul style="list-style-type: none">• Senior project: "An Automatic Grade Input System via Voice"
Constructed speech recognition system include voice activity detection and noise canceling (microphone array beamforming) module to enter student's name and score automatically. Obtained 1st prize. | |

- Mandarin prosody generation [2][4]

Investigated the improvement of CRF-based base-phrase chunk feature and punctuation mark feature in Madarin text-to-speech system.

PUBLICATIONS

- [1] **Han-Yun Yeh.** "end-to-end pinyin to character language model using self-attention mechanism". Master's thesis, National Chiao Tung University, 2019
- [2] Chen-Yu Chiang, Yu-Ping Hung, **Han-Yun Yeh**, I-Bin Liao, and Chen-Ming Pan. Punctuation-generation-inspired linguistic features for Mandarin prosody generation. *EURASIP Journal on Audio, Speech, and Music Processing*, 2019(1):4, 2019
- [3] Yen-Hsuan Lee, **Han-Yun Yeh**, Yih-Ru Wang, and Yuan-Fu Liao. Nctu-ntut at ijcnlp-2017 task 2: Deep phrase embedding using bi-LSTMs for valence-arousal ratings prediction of Chinese phrases. In *Proceedings of the IJCNLP 2017, Shared Tasks*, pages 124–129, 2017
- [4] Yu-Ping Hung, **Han-Yun Yeh**, I-Bin Liao, Chen-Ming Pan, and Chen-Yu Chiang. An Investigation on linguistic features for Mandarin prosody generation. In *2014 17th Oriental Chapter of the International Committee for the Co-ordination and Standardization of Speech Databases and Assessment Techniques (COCOSDA)*, pages 1–5. IEEE, 2014

WORK EXPERIENCE

IBM, Inc
Application Developer

Taipei, Taiwan
June 2018 - Oct. 2018

- Organized health knowledge and designed decision tree for health information suggestion project using Python.
- Implemented backend processing for website user behavior statistics with Python, PHP, MongoDB, MySQL and depolyed service on AWS.

Application Developer Intern

Jul. 2017 - Aug. 2017

- Implemented AOI algorithm for defect detection using Python including OpenCV package.

TEACHING AND ADVISING EXPERIENCE

Teaching Assistant, National Chiao Tung University

Sep. 2016 - Jan. 2018

- "Principle of Microcomputer" course taught by Prof. Yi-Ru, Wang
- "Logic Design and Lab" course taught by Prof. Yi-Ru, Wang

Sep. 2017 - Jan. 2018

Sep. 2016 - Jan. 2017

Teaching Assistant, National Taipei University

Feb. 2015 - June 2016

- "Physics Lab" course taught by Prof. Cheng-Yu, Chiang

Feb. 2015 - June 2016

ACTIVITIES

2020 Formosa Grand Challenge

Taipei, Taiwan

Participant

Nov. 2019 - Apr. 2020

- Build model and labeled data to solve various Chinese reading comprehension task using Pytorh in the preliminary round. Build rule-based dialog system to solve conversation problem with 20 different domains in the final round.

2018 5th Pixnet Hackthon

Taipei, Taiwan

Participant

Aug. 2018

- Developed a device and management website for answering popular dishes using Google AIY Voice Kit and information from text mining on 200,000 Pixnet food blogs.

NTPU CE Student Association

Director of Information Management

Taipei, Taiwan

Sep. 2013 - June 2014

- Managed student information system and designed advertising photo for promoting the activities of student association.
- Instructor of orientation events for freshman.

Leader of Curriculum-design Section

Feb. 2015

- Designed curriculum including IR remoter DIY, speaker/microphone DIY and PC building of 1st NTPU CE winter camp.

TECHNICAL STRENGTHS

Computer Languages Python, C, Java, PHP

Databases MySQL, PostgreSQL

Frameworks TensorFlow