HUNG-TING CHEN

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RESEARCH INTEREST

Natural Language Processing, Machine Learning, Speech Signal Processing

EDUCATION

B.S. in Electrical Engineering, National Taiwan University (NTU) *June 2020*
Overall GPA: 4.26/ 4.30 (No. 4/177)

Relevant Courses
Computer Programming, Data Structure and Programming, Algorithms, Computer Architecture, Operating Systems, Introduction to Computer Networks, Machine Learning, Deep Learning for Computer Vision

AWARDS

- 3 * Academic Excellence Award (top 5% in department in a semester)
- 2nd Place in NTUEE undergraduate innovation award
- 2nd Place in Small Data Training for Medical Images contest (held by HTC Taiwan)

RESEARCH EXPERIENCE

Institute of Information Science, Academia Sinica (Advisor: Prof. Wei-Yun Ma)

Data-to-Text Generation System July 2020 - Present
- Improve attribute mention accuracy by 17% with template-based transformer model
- Enhance generation quality of the system via template-optimization

Dialogue Generation with Latent Pattern [Github Link] June 2019 - June 2020
- Incorporated information from a latent sentence or part-of-speech sequence predicted by model
- Achieved 36.42 BLEU-1 score on Weibo Benchmark Dataset

Speech Processing Laboratory, NTU (Advisor: Prof. Lin-Shan Lee & Hung-Yi Lee)

Entity-Aware Automatic Text Summarization [Github Link] Sept. 2018 - June 2020
- Implemented a transformer-based neural model with pointer-generator network to summarize text
- Incorporated named-entity information into summarization model with modified attention mechanism
- Introduced entity-aware embedding to enhance ROUGE-1, -2 score by 5% and 8%

Meta-Learning on Speech Recognition Feb. 2020 - June 2020
- Investigated methods of meta-learning and implemented a paper in PyTorch [Github Link]
- Researched meta-learning methods on cross-accent automatic speech recognition

PUBLICATION

Hung-Ting Chen*, Yu-Chieh Chao*, Ta-Hsuan Chao*, Wei-Yun Ma."Predict and Use Latent Patterns for Short- Text Conversation" *Accepted to The Fourth Workshop on Reasoning and Learning for Human-Machine Dialogues at AAAI 2021* (*indicates equal contribution)

COURSE PROJECTS

Neural-Based Medical Image Analysis – Disease Detection **[Github Link]** Dec. 2018 - Jan. 2019
- Developed a neural model identifying 14 diseases on NIH chest X-Ray dataset
- Led the team of three people, assigned tasks and designed project structure
- Obtained second place in "Small Data Training for Medical Images contest"

Multi-Source Domain Adaptation on DomainNet [Poster Link] May. 2019 - June. 2019

· Modified Adversarial Discriminative Domain Adaptation (ADDA) into FuzzyADDA
· Implemented Maximum Classifier Discrepancy (MCD) method
· Ranked 1st and 2nd in public and private leaderboards in Kaggle competition out of 20 teams

Evaluation System of Weight Training Performance [Slide Link] Feb. 2019 - June 2019

· Designed circuits to measure and process EMG (Electromyography) signals
· Used Raspberry Pi to receive signals from EMG circuits and send the calculated score to smartphones
· Developed an Android application that could display the calculated score

TEACHING

Teaching Assistant for *Signals and Systems* Feb. 2019 - June 2019

· Graded assignments and two exams
· Answered questions from students at weekly office hours

Teaching Assistant for *Deep Learning for Human Language Processing* Feb. 2020 - June 2020

· Designed and graded programming assignment on Source Separation

LEADERSHIP EXPERIENCES

Activities Manager of Pop Music Club July 2018 - June 2019

· Led a team of 12 members and organized two campus-wide events, drawing more than 300 participants
· Supervised the design and execution of all activities

Vice President of Changhua Area Alumni Association June 2017 - June 2018

· Controlled the overall running of the club and coordinated affairs of 6 departments
· Supervised and assisted in handling 10 events

TECHNICAL STRENGTHS

Programming Languages	C++, Python, Matlab
Machine Learning	PyTorch, Keras, Tensorflow
Integrated Circuit Design	Verilog, System Verilog
Languages	Mandarin (Native), English (Fluent, TOEFL iBT: 109)