Shi-Yan (Eddie) Weng

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Summary

Currently graduate student at National Taiwan Normal University. **Hands-on experiences in Kaldi, Espnet, Linux and Pytorch**. Exploring NLP and Speech Processing and trying to integrate them for better application. Enjoy and willing to accept new techniques to tackle the problems. Interested in devising a better problem-solving method for challenging tasks, and learning new technologies and tools if the need arises.

Education

National Taiwan Normal University　　　　　　　　　　　　　　　　　　　　　　*Taipei, Taiwan*
M.S. IN COMPUTER SCIENCE AND INFORMATION ENGINEERING　　　　　　　　　　　　　*Sep. 2020 -*

National Taiwan Normal University　　　　　　　　　　　　　　　　　　　　　　*Taipei, Taiwan*
B.S. IN COMPUTER SCIENCE AND INFORMATION ENGINEERING　　　　　　　　　　*Sep. 2016 - Aug. 2020*
- awarded 2019 Outstanding Student Award

Honors & Awards

INTERNATIONAL

2018	**Honorable Mention**, The 2018 ICPC Asia Singapore Regional Contest	*Singapore*
2018	**Honorable Mention**, The 2018 ICPC Asia Taipei Regional Contest	*Taipei, Taiwan*

DOMESTIC

2020	**MOST College Student Research Creativity Award**, awarded according to previous scholarship performance, only 200/3,145 are selected.	*Taiwan*
2019	**MOST College Student Research Scholarship**, awarded by Ministry of Science and Technology	*Taiwan*
2019	**Runner-up of Best Poster Presentation Award**, ROCLING 2019	*Taipei, Taiwan*
2018	**Honorable Mention**, National Collegiate Programming Contest	*Taipei, Taiwan*
2018	**First Place of Breakthrough Group**, 2018 ITSA Annual Collegiate Programming Contest	*Taipei, Taiwan*

Publications

A Hierarchical Encoding Framework for Text Readability Prediction
ROCLING 2019　　　　　　　　　　　　　　　　　　　　　　　　　　　*New Taipei City, Taiwan*
SHI-YAN WENG, HOU-CHIANG TSENG, YAO-TING SUNG, BERLIN CHEN　　　　　　　*Oct.3 - 5, 2019*
- Presented a hierarchical framework to encode both the semantic or syntactic structures for better readability classification.
- Combined extra use of traditional handcrafted feature as side information to further boost the model's performance.
- Awarded Runner-up of Best Poster Presentation Award.

An Effective Contextual Language Modeling Framework for Speech Summarization with Augmented Features
EUSIPCO 2020　　　　　　　　　　　　　　　　　　　　　　　　　*Amsterdam, Netherlands*
SHI-YAN WENG, TIEN-HONG LO, BERLIN CHEN　　　　　　　　　　　　　　*Jan.18 - 22, 2021*
- Adopt and contextualize the state-of-the-art BERT-based model for speech summarization.
- Explore the incorporation of confidence scores to see if such an attempt could help alleviate the negative effects caused by imperfect ASR.
- Augmented the sentence embeddings obtained from BERT with extra structural and linguistic features to boost the performance.

An Effective End-to-End Modeling Approach for Mispronunciation Detection
Interspeech 2020　　　　　　　　　　　　　　　　　　　　　　　　　*Shanghai, China*
TIEN-HONG LO, SHI-YAN WENG, BERLIN CHEN　　　　　　　　　　　　　　*Oct.25 - 29, 2020*
- Presented a novel use of hybrid CTC-Attention approach to the Mispronunciation Detection task.
- Performed input augmentation with text prompt information to make E2E model more tailored for the Mispronunciation Detection task.
- Augment the sentence embeddings obtained from BERT with extra structural and linguistic features to boost the performance.

The NTNU System at the Interspeech 2020 Non-Native Children's Speech ASR Challenge

Interspeech 2020 *Shanghai, China*

Tien-Hong Lo, Fu-An Chao, **Shi-Yan Weng**, Berlin Chen *Oct.25 - 29, 2020*

- Technical Report of the Interspeech 2020 Non-Native Children's Speech ASR Challenge supported by the SIG-CHILD group of ISCA.
- Achieved **Second place** in the competition.
- We built our ASR system on top of CNN-TDNNF-based acoustic models and tried various data augmentation strategies.