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EDUCATION

Shanghai Jiao Tong University   Shanghai, China
B.Sc. in Computer Science   September 2016 – June 2020(expected)
- GPA: 89.7/100; Rank: 7/36
- Selected to ACM Honored Class (an elite CS program at SJTU for the top 5% of students)

PUBLICATIONS

1. **SG-Net: Syntax-Guided Machine Reading Comprehension**
   Z. Zhang*, Yuwei Wu*, Junru Zhou, Sufeng Duan, Hai Zhao. Accepted by AAAI 2020 (Long Paper)

2. **Semantics-aware BERT for Language Understanding**
   Z. Zhang*, Yuwei Wu*, H. Zhao, Z. Li, S. Zhang, Xi Zhou and X. Zhou. Accepted by AAAI 2020 (Long Paper)

3. **DCMN+: Dual Co-Matching Network for Multi-choice Reading Comprehension**
   S. Zhang, H. Zhao, Yuwei Wu, Z Zhang, Xi Zhou, Xiang Zhou. Accepted by AAAI 2020 (Long Paper)

4. **Explicit Contextual Semantics for Text Comprehension**
   Z. Zhang*, Yuwei Wu*, Zuchao Li,, Hai Zhao. Accepted by PACLIC 33 (2019) (Oral)

5. **Auto-Retoucher: A Framework for Background Replacement and Foreground Adjustment**
   Yunxuan Xiao, Yikai Li, Yuwei Wu, L Zhu. Accepted by MVA 2019 (Oral)

6. **Personalized Response Generation via Generative Split Memory Network**
   Yuwei Wu, X Ma, D Yang. Submitted to ACL 2020

7. **Semi-supervised Learning for Classifying Interactive Affective Responses**
   Jiaao Chen, Yuwei Wu, D Yang. Submitted to AAAI Workshop 2020
   *Equal contribution

RESEARCH EXPERIENCE

Department of Computer Science and Engineering, Shanghai Jiao Tong University,   Shanghai, China
Research Assistant, advised by Professor Hai Zhao   June 2018 – Present
Explicit Contextual Semantics for Text Comprehension
- Proposed a semantic learning system to enhance contextual representation of existing pretrained language models such as ELMo and BERT for text comprehension and understanding.
- Experiments show that integrating semantic role label embedding boots strong baseline model's performance.
- Achieved state-of-the-art performance on *SNLI* and *SQuAD1.0* dataset.

Semantics-aware BERT for Language Understanding
- Proposed language representation model which is capable of absorbing contextual semantics to address problem that current language models generate semantically incomplete answers when answering questions.
- Proposed a framework to integrate multidimensional semantics in sentence level with contextual text representations.
- Obtained state-of-the-art performance on *SQuAD2.0* and substantially improved results on ten language inference tasks on *GLUE*.

Syntax-Guided Machine Reading Comprehension
- Proposed using syntax to guide the text modeling of both passages and questions by incorporating explicit syntactic constraints into attention mechanism for better linguistically motivated word representations.
- Proposed a dual contextual architecture called syntax-guided network, which consists of a BERT context vector and a syntax-guided context vector, followed by a aggregation layer.
- SG-Net has gained a significant improvement over the fine-tuned BERT baseline on *SQuAD2.0* and *RACE*.

School of Interactive Computing, Georgia Institute of Technology   Atlanta, Georgia
Research Assistant, advised by Professor Diyi Yang   July 2019 – Present
Personalized Response Generation
- Proposed personalized dialog datasets, which consisted of 2 million conversations and 300,000 authors with extra author profile information and comment histories.
- Proposed generative split memory network for personalized generation which incorporates both author profile and comment in separate memories which outperforms state-of-art personalized generation models.
- Proposed novel evaluation metrics for personalized generation tasks by considering authors' attributes.

Semi-supervised Learning for Classifying Interactive Affective Responses

- Proposed semi-supervised models via data augmentation for text classification on Interactive Affective Responses.
- Performed data augmentations such as paraphrasing on labeled data to get more training samples during preprocessing.
- Performed supervised learning on labeled data, entropy minimization on unlabeled data and unlabeled data with high confidence as our pseudo labeled data to enhance the training procedure

COURSE PROJECTS

- MX-Compiler (Java) [Link]   2018
    - Compiled C-and-Java-like language to x86-64 Assembly in NASM assembly.
    - Implemented graph coloring register allocation, semantic analysis, dead code elimination, and other optimizations such as function inlining and simple constant propagation.
    - My compiler runs faster than gcc O1 on test set.
- SimpleDB-2019 (Java) [Link]   2019
    - Simple Database Management System in Java.
    - Implemented query optimization, locking, transactions, and concurrent queries.
- RISC-V CPU (Verilog) [Link]   2018
    - CPU with five-stage pipeline and two-way cache from scratch.
- Text Classification and Sentiment Analysis (Python) [Link]   2018
    - A binary classification task on News and Media Article
    - Used selected methods including textCNN, textRNN to implement classification
    - Won fourth place on the Kaggle leaderboard.
    - Course grade: 96/100 (top 5% of the 180 students who took the CS420 Machine Learning Course at SJTU)

TEACHING EXPERIENCE

CS 122: Computer Programming, Shanghai Jiao Tong University
Teaching Assistant   September – December 2017
- Responsibilities included running recitation sections and designing and grading homework assignments

SELECTED PROJECTS

Stanford **Qu**estion **A**nswering **D**ataset **(SQuAD) 2.0** Leaderboard on Machine Reading Comprehension   July 2019
    - The **best** among all single models and **2nd best** among all models in terms of EM and F1 scores
    - The **first** team to surpass human benchmark on both EM and F1 scores with a single model in terms of submission time
    - The **first** team to exceed 90% F1 score with ensemble models in terms of submission time
    - [Leaderboard] [Paper] [Report]

Re**A**ding **C**omprehension dataset collected from English **E**xaminations (**RACE**) Leaderboard on Machine Reading Comprehension   March 2019
    - The **best** among all submissions in terms of accuracy score
    - [Leaderboard] [Paper] [Report]

Stanford **N**atural **L**anguage **I**nference **(SNLI)** Leaderboard on Language Inference   April 2019
    - The **best** among all submissions in terms of accuracy score
    - [Leaderboard] [Paper]

General **L**anguage **U**nderstanding **E**valuation **(GLUE)** Leaderboard on Language Understanding   March 2019
    - The **3rd best** among all submissions in terms of averaged scores on eleven datasets
    - [Leaderboard] [Paper]

SELECTED AWARDS AND HONORS

- KoGuan Encouragement Scholarship (top 1.5% at SJTU)   2018
- Zhiyuan Honorary Scholarship (top 10% at SJTU)   2016, 2017, 2018
- Shanghai Jiao Tong Scholarship (top 20% at SJTU)   2016, 2017, 2018
- Meritorious Winner of the Mathematical Contest in Modeling (top 10%)   2018

ADDITIONAL INFORMATION

Technology and Language Skills:
- Programming Languages: C++, Python, Verilog, Matlab, SQL, C#, Java.