

EDUCATION

*** University

Shanghai, China

B.Sc. in Computer Science

September 2016 – June 2020(expected)

- GPA: */100; Rank: **/**
- 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 an 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 Question Answering Dataset (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](#)]

ReAding Comprehension dataset collected from English Examinations (RACE) Leaderboard on Machine Reading Comprehension March 2019

- The **best** among all submissions in terms of accuracy score
- [[Leaderboard](#)] [[Paper](#)] [[Report](#)]

Stanford Natural Language Inference (SNLI) Leaderboard on Language Inference April 2019

- The **best** among all submissions in terms of accuracy score
- [[Leaderboard](#)] [[Paper](#)]

General Language Understanding Evaluation (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.