

## EDUCATION

**Zhejiang University**

B.Eng. in Computer Science and Technology

Hangzhou, China

Sep. 2015 – Jul. 2019

- GPA: 3.86/4.00
- Minor in [Advanced Honor Class of Engineering Education, Chu Konchen Honors College](#) (40/6,000)

**Georgia Institute of Technology**

PhD in Computer Science

Atlanta, USA

Aug. 2019 – Present

## PUBLICATIONS

1. **Jiaao Chen**, Jianshu Chen, Zhou Yu, “Incorporating Structured Commonsense Knowledge in Story Completion”, 2019 (Accepted), *AAAI* (Acceptance Rate: 16%).
2. Diyi Yang\*, **Jiaao Chen\***, Zichao Yang, Dan Jurafsky, Eduard Hovy, “Let’s Make Your Request More Persuasive: Modeling Persuasive Strategies via Semi Supervised Neural Nets on Crowdfunding Platforms”, 2019(Oral), *NAACL*. (\*means equal contribution)

## RESEARCH EXPERIENCE

**School of Computer Science, Carnegie Mellon University**

Research Assistant, advised by Professor Robert Kraut

Pittsburgh, USA

Sep. 2018 – Present

*Recommender System American Cancer Society’s Cancer Survivor Network*

- Developed a recommender system with collaborative filtering algorithms for American Cancer Society’s Cancer Survivor Network, and deployed the system online to help cancer patients and care givers.
- Proposed pipelined graph-based recommender system by incorporating features learned from user-thread-topic words interaction graph, which generates performance than several baselines.
- Currently researching supervised end-to-end learning over graph with multi-type edges, multi-type nodes and dynamic updating through time.

*Persuasion Strategy Identification*

- Proposed a semi-supervised hierarchical neural network model to identify the persuasive strategies employed in each sentence in each request from crowdfunding platforms and predicted the overall persuasiveness scores of these requests.
- Conducted experiments to show that our method outperformed several baselines.
- Found persuasive strategies which offered increased interpretability of persuasive speech and could be applied in other similar situations.
- A paper got accepted by NAACL.

**Department of Computer Science, University of California**

Research Assistant, advised by Professor Zhou Yu

Davis, USA

Jul. 2018 – Sep. 2019

*Incorporating Commonsense Knowledge for Story Completion*

- Proposed a neural story ending selection model that utilized a combination gate to combine three types of information including: narrative sequence, sentiment evolution and structured commonsense knowledge.
- Carried out experiments which demonstrated that our model outperformed state-of-the-art approaches in a public dataset, ROCStory Cloze Task.
- Wrote a technical paper and the paper got accepted by AAAI 2019 (acceptance rate 16%).

**Department of Computer Science, Zhejiang University**

Research Assistant, advised by Professor Huajun Chen

Hangzhou, China

Jan. 2018 – Present

*KBQA: Question Answering over Knowledge Graph via Matching*

- Proposed a reinforcement model to transform multi-hop questions into several one-hop questions.
- Proposed to model one-hop KBQA task as a matching and ranking task by concatenating paths in knowledge graph as sentences, matching questions and paths via CNN over similarity matrix and ranking the pairs.
- Got performance superior to state-of-the-art models on several KBQA datasets.

*Predicting Air Quality*

- Proposed a neural network model combined CNN and RNN to predict the air quality for the next 48 hours based on previous air quality record in Beijing and London. Used CNN to extract features from a time slide and used RNN to encode the time series information for prediction.

- Participated in KDD Cup 2018 and ranked top 6%.

#### *Text Classification for News*

- Crawled, classified news from the Internet to determine whether these pertained to underground industries and rated their impacts.
- Used selected methods including FastText, textCNN, textRNN, RCNN and HAN to implement classification model, ensembled them together, and obtained better accuracy over several baseline models.

#### TEACHING EXPERIENCE

##### **Department of Computer Science, Zhejiang University**

Hangzhou, China

Teaching Assistant at Computer Organization with Professor Qingsong Shi

Mar. 2018 – Jun. 2018

- Taught weekly labs for over 50 students on Pipelined CPU.
- Provided feedback on students' homework and course projects.
- Held weekly office hours to answer students' questions.

#### SELECTED COURSE PROJECTS

##### **Othello with Simple Alpha Zero** 2018

- Used reinforcement learning to implement Othello-playing agent.
- Learned source code of Alpha Zero and implemented simplified PyTorch version for Othello.
- Competed with other students in class and won all games.

##### **Chatbot for Xiaomi Selling Service** 2018

- Built a conversation dataset and implemented chatbots for Xiaomi selling service.
- Implemented a retrieval-based chatbot by learning similarity of input questions and questions in dataset.
- Implemented a generate-based chatbot by Seq2Seq and Attention.
- Deployed the chatbots on WeChat Mini Programs

##### **Mini-OS** 2017

- Designed and implemented pipelined CPU with cache, VGA and PS2 using Verilog.
- Developed Linux operating system kernel using C on personally designed CPU (mainly consisting of three parts—memory management, process control, and file system).

##### **Tic-Tac-Toe-Playing Nao Robot** 2017

- Programmed on Nao Robot to let the robot play Tic-Tac-Toe with human.
- Designed gaits and modeled motion of arms for Nao Robot using theory of Inverted Pendulum; programmed on Nao Robot with naoqi to make the robot able to walk and move arms and hands.
- Utilized camera on robots, used OpenCV to analyze the photos (detect the route, chesses and chess map).
- Used deep reinforcement learning to learn the playing policy for tic-tac-toe.

##### **Inverted Pendulum on Wheel Robot** 2016

- Programmed on a wheel robot that allowed the robot to maintain an inverted pendulum on it when finding shortest path in a maze.
- Used Labview and Matlab to implement Inverted Pendulum on a wheel robot via PID control.
- Implemented A\* algorithms on the robot to find shortest routes in the maze.

#### SELECTED AWARDS AND HONORS

- Honorable Mention at MCM/ICM Contest. 2017
- Academic Physics Contest at Zhejiang University, fourth place. 2017
- ACEE Honor Class at Chu Konchen Honors College, Zhejiang University (40/6,000). 2016
- Scholarship for Academic Achievement at Zhejiang University (15%). 2016
- Scholarship for All-around Achievement at Zhejiang University (15%). 2016
- ACM School Trial at Zhejiang University, third prize. 2016

#### ADDITIONAL INFORMATION

##### **Technology and Language Skills:**

- Programming Languages: C/C++, Python, Verilog, Matlab, Labview, SQL, C#, Lex/Yacc.
- Development Skills: Pytorch, Tensorflow, OpenCV, QT.

##### **Interests:**

- Piano (Level 10 Certificate), Basketball.