Fudan University 220 Handan Rd. Shanghai, China

# Jiayang Cheng

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#### **Education**

#### **B.S.** in Data Science

#### **Fudan University**

**Sept 2017 – July 2021 (Expected)** 

- Overall GPA: 3.73/4.0, Major GPA: 3.89/4.0, Rank: 3/74.
- Core Courses: Probability Theory, Linear Algebra, Numerical Algorithms, Methods of Optimization, Social Network Mining, Statistics, Principle of Computer Engineering, Databases, Data Structure, Programming Languages.

### **Research Experience**

#### **Knowledge Works Research Lab**

## **Fudan University**

Oct 2019 – Jan 2020

Improving Relation Extraction with Question Answering as Validation (Submitted)

Mentor: Dr. Haiyun Jiang

Advisor: Prof. Yanghua Xiao, Prof. Deqing Yang

- Inspired by the similarity between the task of question-answering and the task of relation extraction, we design a generation-then-validation framework that can improve the results from relation classification models by doing question answering, without need of extra data.
- Conducted extensive experiments to prove the effectiveness of the framework (On average, +1.6% in Area Under PR Curve, +7% in Precision@100).
- Contributed as the **co-first author** to the paper, which has been submitted to IJCAI 2020.

Oct 2019 - Present

Entity Understanding with Hierarchical Graph Learning for Text Classification (On-going)

Mentor: Dr. Haiyun Jiang

Advisor: Prof. Yanghua Xiao, Prof. Deging Yang

- Implemented a Graph Neural Network and soft-clustering based text classification model with tensorflow.
- Conducted preliminary experiments, demonstrating that the model is capable of utilizing the syntactic information even when there is some invalid information (reaching 76.3% accuracy when only using the syntactic information of sentences, and about 10% of sentences are of empty syntactic information).
- We are currently planning to further formulate the ensemble models to improve the relation extraction performance with the additional information retrieved by our model.

Jul 2019 - Oct 2019

Learning Syntax-enhanced Word Embeddings by Graph Convolutional Networks for Relation Extraction Advisor: Prof. Deqing Yang

- Adapted a state-of-the-art Graph Convolutional Networks (GCNs) based word representation model SynGCN to our application.
- Demonstrated the effectiveness of utilizing the syntactic information within sentences to improve the performance of embedding-based relation extraction models, with a 10% increase of recall and 4% increase of maxF1.
- Contributed as the third author to the paper, which is to be submitted to ISWC 2020.

## **Additional Experience and Skills**

- Volunteer Teaching Program at Yongping, Dali, Yunnan Province, China. July 2018.
- Awarded 2rd prize at Fudan University in the 2018 2019 academic year, and 3rd prize in the 2017 2018 academic year.
- Programming Languages Python, C/C++, Matlab, R, SQL, LATEX
- Framework Tensorflow, Pytorch
- English Tests TOEFL 105 (speaking 23), CET-6 652