## **JUNRU LU**

### Natural Language Processing and Machine Learning enthusiast

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### **EDUCATION**

## M.S. in Applied Urban Science & Informatics

#### **New York University**

🛗 Sept. 2018 - Sept. 2019

New York City, USA

- GPA: 3.63/4.00
- **Project1**: Collect geo-tagged tweets in NYC using Twitter API and create emotional time-spatial maps through sentiment analysis [Codes].
- **Project2**: With RandomForest and LGBM models, use Yelp reviews and related user and business historical infos to predict the reviews' ratings [Codes].

# B.Eng. in Information Management and Information System University of International Relations

🗎 Sept. 2014 - July 2018

Peijing, China

- GPA: 90.6/100
- Supervisor: Dr. Binyang Li
- Final Thesis: a two-stage multi-attention Machine Reading Comprehension model (A-Reader). In A-Reader, text representation is realized with self-attention, while semantic interaction between article and question is based on self-attention and bi-attention. "Two-stage" refers to firstly use the final semantic matrix (FSM) within a binary classification model to select a best paragraph, and secondly predict the answer via pointer network with the FSM.

### **Double Bachelor of Economics**

#### **Peking University**

M Sept. 2015 - July 2018

**♥** Beijing, China

- GPA: 84.2/100
- Major courses: Accounting, Econometrics, Microeconomics, and Finance.

## **WORK EXPERIENCE**

# Natural Language Processing Engineer Internship Beijing iDeepWise Artificial Intelligence Tech Ltd

mar. 2018 - June 2018

- Peijing, China
- Project1: Research on two sentence similarity models, TextCNN and Siamese-LSTM. TextCNN is to construct 2D input by calculating W2V-Cosine-Similarity of sentences' sub-units, while Siamese-LSTM is to use Manhattan distance to compare the final hidden states of the sentences encoded with LSTM [Codes].
- **Project2**: Implement a two-stage BiDAF model on Dureader Dataset. The BiDAF model is a traditional Machine Reading Comprehension model, which uses bi-LSTM to realize text representation and bi-attention on semantic interaction. "Two-stage" refers to firstly select the best paragraph with manually selected features, and secondly predict the answer via Pointer Network.

## Data Mining Engineer Internship, Dept. of Text Mining Beijing Baifendian InfoTech Ltd

m Oct. 2017 - Mar. 2018

Beijing, China

• **Project**: Develop a single-round Community-based Chinese DeepQA System. The system consists of (Q, A) knowledge database, first-round query engine based on Elasticsearch, second-round selective modules including semantic similarity check on (New Q, Old Q) and pair quality check on (New Q, Old A), and compensatory web crawler for unknown new questions [Codes].

## **PUBLICATIONS**

### **Journal Articles**

 Lu, Junru et al. (2019). "Identifying User Profile by Incorporating Self-Attention Mechanism based on CSDN Data Set". In: Data Intelligence 1.2, pp. 160–175.

## **ACHIEVEMENTS**



### National 6th position - SMP

- The 6th position in the final-round of the 6th national-level Social Media Processing Contest. The contest asked to realize 3 tasks including keywords extraction from blogs, user interests labeling, and user growth prediction.
- For the 1st task, we used Tf-Idf, Textrank, LDA, and manual rules combined to find key words. The 2nd task was realized by a stacking classification on document embeddings (a later improvement of 3 % was to use TextCNN and selfattention). The final task was done with a regressive stacking model [Codes].



#### **University Scholarships**

University Scholarships of University of International Relations 2015, 2016, 2017 (Top 5%)



### **Undergraduate Honor**

2018 excellent graduation thesis and outstanding graduates of University of International Relations

## STRENGTHS & SKILLS

Natural Language Processing

Machine Learning | Web Crawler

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SkitLearn

Numpy

Tensorflow

Pandas

Keras

PySpark

## CODING

Python Sql Javascript (2019 Summer)



last updated: June 10th, 2019