

# Chongyang ZHAO

Computer Science Student at BJTU

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I am a final-year undergraduate student at Beijing Jiaotong University, where I am supervised by Dr. Runmin CONG. My research interests include Computer Vision and Deep Learning. Recently, I focus on image segmentation, object detection and vision & language problems.

## Education

- **Beijing Jiaotong University**  
*BEng in Computer Science and Technology* September 2017 – Present
- **Lancaster University**  
*BSc (Hons) in Computer Science* September 2017 – Present
  - Predicted First Class Honours Degree (LU Degree GPA: 3.89/4)
  - BJTU Overall GPA: 3.17/4
  - Dean's List (Top 10%)
  - Four-year programme, delivered in English. Student will receive Bachelor's degree from both Lancaster University and Beijing Jiaotong University, basic mathematical and programming skills learned in year one and professional knowledge learned in the next three years.

## Research Experience

- **Research Assistant** Beijing Jiaotong University  
*Institute of Information Science* April 2020 – Present
  - Advisor: Prof. Runmin CONG
  - **Referring Expression Segmentation:** Based on Deep Learning, this project will investigate how an image can be segmented the corresponding region that covers the visual entities described by a natural language expression.
- **Research Assistant** Beijing Jiaotong University  
*Institute of Cloud Computing and Data Science* March 2019 – April 2020
  - Advisor: Prof. Zhihai WANG and Prof. Jidong YUAN
  - **Lipreading based on Deep Learning:** I completed a project about lip reading, and learned some computer vision and deep learning basic knowledge. For lip reading, the face is detected by Faster R-CNN firstly, then extract key points of the lips. Next, the feature sequence of the extracted key points is input into the LSTM network to extract time series information and semantic information. Finally, the results are predicted by softmax.

## Teaching Experience

- **Fundamentals of Computer** Beijing Jiaotong University  
*Teaching Assistant* 2020 Fall
  - Lecturer: Prof. Jie LIU

- **The C Programming Language**

*Student Tutor*

- Programming language tutorial
- Computer Science learning experience sharing

Beijing Jiaotong University  
*September 2018 – June 2020*

## Work Experience

- **Text Analytics Intern**

*Blue Mine Tech*

Fengtai District, Beijing  
*June 2019 – August 2019*

- In text clustering, we try to use unsupervised clustering algorithms such as K-MEANS and DBSCAN, but the effect is not good. Instead, we use clustering algorithms such as complex network, and the effect is close to the natural language habit. We also try to use the dependency parsing function in pyltp of HIT to optimize the results, but considering the running efficiency and cost, we did not add it into the program.

## Coursework Project

- **Role-Playing Game: Vector – 70 Heroes**

*SCC210 Group Project*

LUC@BJTU  
*2019 – 2020*

- Year 3 Group Project, our group has 7 members. We developed a exciting RPG game and implemented a VectorEngine (a game engine) both based on JSFML (Java Simple and Fast Multimedia Library).
- My task is to develop the UI of the game and the related work of game engine.

## Related Courses & Skills

- Related Courses

- LUC@BJTU: SCC202 Human Computer Interaction(Dr. Jiangtao Wang)
- Stanford University: CS231n Convolutional Neural Networks for Visual Recognition (Prof. Fei-Fei Li)(Online)
- Coursera: Machine Learning, Deep Learning (Prof. Andrew Ng)(Online)
- Perking University: Overview of Artificial Intelligence (Prof. Wenmin Wang)(Online)

- Skills

- Python, TensorFlow, C++, Linux, L<sup>A</sup>T<sub>E</sub>X, C, Java