

# Boyi Li

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## EDUCATION

### Zhejiang University

Sept 2014 – Jun 2018

Bachelor of Computer Science and Technology at Zhejiang University, China

- **GPA:** 3.91/4.00 (88.28/100) **Rank:** 13/137
- **GRE:** 323 + 3.5 **TOEFL:** 108 (R29/L27/S23/W29)

### BIGHEART Laboratory, National University of Singapore

Jul 2017 – Sept 2017

Research Assistant under the direction of *Prof. Brian Y. Lim*, Singapore

### Databases and Data Mining Laboratory, Simon Fraser University

Oct 2017 – Feb 2018

Exchange student under the direction of

*Prof. Martin Ester* and *Prof. Chung, Fu-lai Korris*, Canada

## RESEARCH PROJECT

### Collaborative Active Learning Tree for Cold-Start Item Recommendation

Oct 2017 – Feb 2018

*Paper submitted to KDD 2018 Conference,*

[Paper Draft](#)

*supervised by Prof. Martin Ester and Prof. Chung, Fu-lai Korris*

- Implemented a content-based collaborative filtering method for cold-start item problem.
- Implemented an adaptive bootstrapping method based on decision tree for cold-start item problem.
- Designed a Collaborative Active Learning Tree model(CALT) which combined item content-information and active learning method to solve cold-start item problem.
- Achieved good RMSE and Precision for predicting ratings of cold-start item, outperforming most of the state-of-the-art methods for cold-start item problem.

### Health management and food recommendation APP

Jul 2017 – Sept 2017

*BIGHEART Laboratory, National University of Singapore,*

*supervised by Prof. Brian Y. Lim*

- Achieved a web interface of requesting and replying data for this android app.
- Implemented a Python API by flask to achieve request dispatch/response and deployed it on the server.
- Implemented a two-constraint sorting algorithm based on genetic algorithm, sorting according to taste and health value of each food item for food recommendation part of this app.

### Health insurance data fraud detection model

Feb 2017 – May 2017

*Team leader in Student Research Training Program, Zhejiang University, China*

- Implemented an anomaly detection algorithm to find fraud of excessive health care, decentralized hospitalization, and decomposed charging.
- Modified the FP-Growth algorithm to better extract the testable data set and remove redundant data.
- Preprocessed by PCA, a four-layer neural network was built by back propagation to classify the health insurance data. The fraud data in health insurance could be recognized with high precision (96.7%).

### The influence of the commission of UGV on traffic condition, ICM, 2017

Jan 2017 – Feb 2017

*Team leader in MCM/ICM Contest, 2017*

[Final Electronic Report](#)

- Applied the operation mechanism of cellular automata to traffic modeling.
- Coded the project using C++ and R.

## ACADEMIC PROJECT

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### Mini-C Compiler

May 2017 – Jun 2017

*Project for Compiler Principle Course*

- Implemented lexical analysis and syntax analysis by Flex and Bison.
- Implemented a semantic analysis algorithm to create an intermediate tree.
- Designed an algorithm to traverse the tree, generated it to x86 assembly language.

### Stock Trading System [Demo](#)

Apr 2017 – Jun 2017

*Project for Software Engineering Course*

- Designed Database for users in Stock Trading System.
- Implemented Transaction Management System and Account Management System by PHP and HTML and deployed it on the web server.

### “Escape the Room!” [Demo](#)

Dec 2016 - Jan 2017

*Project for Computer Graphics Course*

- Designed models for the room and items by Maya.
- Implemented the illumination for the room, texture for the items by OpenGL.
- Created Scene Roaming System based on OpenGL.

## AWARDS

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2017 Mathematical Contest in Modeling of America Honorable Mention	2017
Scholarship for Excellent Student of Zhejiang University (top 10%)	2017
Academic Scholarship of Zhejiang University Third Prize (top 15%)	2017
Collegiate Programming Contest of Zhejiang University, Third Prize	2016
Academic Scholarship of Zhejiang University First Prize (top 1%)	2015

## ADDITIONAL EXPERIENCE

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### Badminton Team of College of Computer Science 2015 - 2018

*Member of the team, College of Computer Science, Zhejiang University*

- Helped the team win the third place in the annual badminton game three years in a row(2015, 2016, 2017).

### International Communication Office 2016 – 2017

*Student assistant, College of Computer Science, Zhejiang University*

- Communicated with international students and helped them get familiar with life in Zhejiang University.
- Helped international professors with visa issues and help them settle in alright in the college.

## PROFESSIONAL SKILLS

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**Platform:** Windows, Linux, Web

**Programming Language:** C (4 years), Python (2 years), Java (2 years), C++ (1 year), Matlab/R (1 years), SQL, LaTeX