

# JIAYUAN ZHOU Ph.D. student

| EMAIL: [jiayuan.zhou@queensu.ca](mailto:jiayuan.zhou@queensu.ca) | Site: [jiayuan.dev](http://jiayuan.dev) | LinkedIn: [in/zhoujiayuan](https://www.linkedin.com/in/zhoujiayuan)

| MOBILE: +(1)343-333-5254 | Intended graduation date: Fall, 2020

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## TECHNICAL SKILLS

**Domain** Data Mining, Machine Learning, Software Engineering

**Skills** Supervised & Unsupervised Learning, Predictive & Explanatory Modelling, Computational Data Analysis, Natural Language Processing

**Languages** Java, Python, R, SQL

## WORK EXPERIENCE

### BlackBerry Limited

Advanced Technology  
Development Labs  
Jan. 2020 – present

### Security Assurance Research Student

- Proposed a prototype of a log analytics platform which can help analysts find suspicious logs from multi-million-scale logs and provide explainable diagnosis result.
- Built a prediction model to predict the possible issues that are associated with log snippets. The information of possible issues was extracted from documentation using NLP and unsupervised learning approaches.
- Proposed a log-trace-back mechanism to efficiently identify the original log file of the log snippets provided by customers from multi-million-scale logs.

### Queen's University

Sept. 2017 – present

### Research Assistant at SAIL Lab

(Software Analysis and Intelligence Lab)

- A study of the performance differences between **automated machine learning** (AutoML) and **hyperparameter tuning machine learning** (HptML). The experiment was conducted on Microsoft Azure Cloud. Using Software Engineering defect dataset, the study provides practical suggestions on how to achieve an optimal balance between performance and time consumption costs.
- A case study of bounties in Stack Overflow. The study applied **statistical modeling** for revealing and interpreting the association between bounties and question solving-likelihood/solving-time. Built a **neural network** to determine the likelihood of a successful bounty question.
- A case study of bounties (from Bountysource) in GitHub issue reports. The study used **statistical modeling** to provide insights on how to leverage bounties to address issue reports.

### Kyushu University, Japan

Feb. 2019 – Apr. 2019

### Visiting Researcher at POSL Lab

(Principles of Software engineering and programming Languages Lab)

- I received a highly competitive award to visit professor Yasutaka Kamei for a three-month research collaboration through the Mitacs Globalink program.
- A case study of donations (from Open Collective) in GitHub projects. The study performed a **statistical analysis** of the characteristics of donors to uncover the donation-usage pattern of project maintainers.

## WORK EXPERIENCE

**Alibaba Group**  
B2B Technology  
Department  
June 2015 – Aug. 2017

### R&D Engineer & Senior Development Engineer

- Worked as a technical product owner of a **large-scale distributed** trading platform, which enables multi-million scale merchandise and orders to flow freely between the B2B and the C2C e-commerce platforms.
- Designed and developed a **merchandise recommendation** system, which can recommend similar merchandise from different e-commerce platforms. The recommendation model was built from the trading data across different e-commerce platforms using **information retrieval** and **machine learning** techniques. The recommendation system was also provided to clients through a Chrome extension.
- My work yielded **five patent submissions** and three of them have already been granted by the National Intellectual Property Administration of China.

Chrome extension:  
<https://goo.gl/IIPNjo>

## EDUCATION

**Queen's University**  
Sept. 2017 – Fall, 2020  
(Intended graduation date)

### Doctor of Philosophy (GPA: 4.10/4.3)

I'm currently pursuing my Ph.D. degree under the supervision of professor Ahmed E. Hassan. My research interests focus on Mining Software Repositories (MSR), which applies Data Mining to solve Software Engineering problems. My research topic is about studying the extrinsic rewards in open source software communities. For example, how to leverage bounties (i.e., the monetary incentive) to address GitHub issue reports, and what is the impact of donations on open source software. I was directly promoted to the Ph.D. program without completing my M.Sc. degree in May 2019.

**Dalian Maritime University**  
Sept 2011 – July 2015

### BACHELOR OF ENGINEERING (GPA 3.86/4.3)

I obtained my Bachelor degree in Software Engineering from Dalian Maritime University, which is one of the national key Universities in China. I participated in many competitions including the National College Students Innovation and Entrepreneurship Training Program, Mathematical Contest In Modeling, and ACM-ICPC. Due to my outstanding performance, I had been awarded several scholarships.

## JOURNAL PUBLICATIONS

Empirical Software  
Engineering  
(Impact factor: 4.457)  
**Accepted** June 2019.

**Zhou J**, Wang S, Bezemer CP, Hassan AE, "Bounties on Technical Q&A Sites: A Case Study of Stack Overflow Bounties".

(Selected as *Journal First paper* by *International Conference on Software Engineering*, 2020.)

IEEE Transactions on  
Software Engineering  
(Impact factor: 4.778)  
**Accepted** Feb. 2020.

**Zhou J**, Wang S, Bezemer CP, Zou Y, Hassan AE, "Studying the Association between Bountysource Bounties and the Issue-addressing Likelihood of GitHub Issue Reports".

## SELECTED AWARDS

**Queen's University**  
**Mitacs**  
**Avanade Inc.**  
**Queen's University**  
**ACM-ICPC**

(2019) Duncan and Urlla Carmichael Fellowship.

(2018) Global link Research Award.

(2018) Queen's University's annual hackathon, *Winner of Avanade Prize*

(2018) Queen's University's annual hackathon, *finalists*.

(2013) Asia Regional Contest, Changchun Site, *Bronze Medal*.

## GRANTED PATENTS

(National Intellectual Property Administration of China)

May. 2018 (CN201610834864) Object association method and system.

Mar. 2018 (CN201610772470) Information comparison method and apparatus.

Mar. 2016 (CN201610710941) Method and device for processing object data set.