Yuwei **Jiao**

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Education

Computer Science, Thesis Based, Aritificial Intelligence Group
University of Waterloo

CANDIDATE FOR MASTER OF MATHEMATICS, AVERAGE GRADE: NAN
2016. 9 - Exp. 2018. 4

- Algorithm Design & Analysis, High-Stakes Information Retrieval, Multiagent Systems, Software Engineering for Big data

Computer Science
University of Waterloo

EXCHANGE PROGRAM, AVERAGE GRADE: 90/100
2015. 9 - 2016. 4

- Introduction to Artificial Intelligence, User Interface, Introduction to Database Management, Distributed Systems, Numeric Computation For Financial Modelling

Computer Science and Technology
Tsinghua University

CANDIDATE FOR BACHELOR OF ENGINEERING, AVERAGE GRADE: 86/100
2012. 9 - 2016. 7

- Introduction to Machine Learning, Introduction to Artificial Intelligence, Artificial Neural Networks, Fundamentals of Computer Graphics, Software Engineering, Operating Systems, Theory of Computer Network

Experience

xuetangX.com
Beijing, China

RESEARCH INTERN, DATA MINING GROUP
2016. 5 - 2016. 8

- Help to build and improve a system to segment course subtitles into multi-paragraph subtopics using texttiling and n-gram algorithms. Extract key words of each lesson and form keywords cloud for a better overview.
- Map after-class exercises to each subtopic using several classification algorithms including Bayesian, SVM and KDD. Compare the results under different situations.
- Develop online editing platform which enables teaching assistants and professors to correct topics and view difficulty points conveniently. The system has been applied to several courses and received quite satisfactory results. Will be published online this winter.

University of Waterloo
Waterloo, Canada

UNDERGRADUATE RESEARCH ASSISTANT, SUPERVISED BY PROFESSOR JESSE HOEY
2016. 1 - 2016. 5

- Research: Social Dilemmas: From Rational to Human Perspectives.
- Start from a purely rational standpoint to human solutions and the evolution of cooperation. Complete a paper review based on twelve related publications in biology, psychology and computer science area.
- Apply humans' emotions and social interactions to intelligence machine. Test on Iterated Prisoner's Dilemma Game. Better performance than traditional tit-for-tat agent. Similar behaviour graph compared with human players.

Tencent
Shenzhen, China

SOFTWARE ENGINEERING INTERN
2015. 7 - 2015. 8

- Developed Online Poster Maker Application. Written in php + SQL on the server end and HTML5 + CSS + javascript on the front end. Implemented in Lithium MVC Framework. Added animation effects and background music to make posters more attractive.
- Enabled users to create a series of posters easily with provided templates for specific scenes, generate web pages and share with friends and teammates online. Could be used as lightweight PowerPoint in life and work.
- Provided server end support for IOS Poster Maker Application developed by Tencent. Enabled users to select templates, upload images and share posters via Wechat (one of the most popular social applications in China) from mobile phone more conveniently.
- The application is now used in official accounts management supported by Wechat.

Tsinghua University *Beijing, China*

UNDERGRADUATE COURSE: INTRODUCTION TO MACHINE LEARNING *2015. 2 - 2015. 6*

- Project: Decision Tree Algorithm
- Implemented decision tree to help bank decide whether a person's income exceed a certain amount based on related data.
- Handled missing data and numerical attributes differently and properly with C4.5 decision tree algorithm. Trained a post-pruned decision tree to avoid overfitting problem. Received an accuracy rate of more than 85 percents.

University of Melbourne *Melbourne, Australia*

UNDERGRADUATE RESEARCH ASSISTANT, SUPERVISED BY PROFESSOR RUI ZHANG *2015. 1 - 2015. 2*

- Research: A new method to Suffix Tree optimization.
- Updated Suffix Tree between activated nodes and ending nodes to reduce time expense. Raised updating efficiency by five percent.
- Implemented an application to show the process of creating improved suffix tree with Java Applet. Enabled users to interact with it and understand how improved suffix tree worked.
- Award a prize in "Data Analytics, Information Retrieval and Algorithms" in the final evaluation.

Tsinghua University *Beijing, China*

UNDERGRADUATE COURSE: ARTIFICIAL NEURAL NETWORKS *2014. 9 - 2015. 1*

- Project: Pattern Recognition
- Implemented neural network models without the help of neural network tools such as Caffe or Theano to classify CIFAR-10 dataset of 60,000 color images in 10 classes.
- Applied neural network with fully connected layers(MLP) and convolutional neural network(CNN) to classify the images and received the accuracy rate of more than 90 percents and 70 percents respectively.
- Combined neural network with fully connected layers and support vector machine(SVM) to increase the accuracy rate by 5 percents.

Activities

Undergraduate Research Opportunities Conference *Waterloo, Canada*

VOLUNTEER *Exp. 2016. 9. 29 - 2017. 10. 02*

Help to hold mini-research project on social dilemmas and get them to write prisoner's dilemma bots, and then run a tournament.

BroadCasting Station of Tsinghua University *Waterloo, Canada*

TEACHING ASSISTANT *Exp. 2016. 9 - 2017. 4*

CS 135: Designing Functional Programs

BroadCasting Station of Tsinghua University *Beijing, China*

CORE MEMBER *2014. 6 - 2015. 6*

Worked in Music Group. Responsible for weekly audio recording and editing to broadcast in campus. Published our music audio program to Ximalaya FM (one of the most popular broadcast website in China).

Student Association of Computer Science *Beijing, China*

MEMBER *2013. 9 - 2014. 6*

Worked in Publicity Department. Responsible for posters designing and videos editing for students' parties and activities.

Skills

Programming C/C++, Java, Python, Matlab, Javascript
Web Development HTML5, CSS, PHP, SQL, jQuery
Languages Mandarin, English

Awards

2015 **University of Waterloo / Tsinghua University Award**, Exchange Program *Waterloo, Canada*

2015 **University of Melbourne Award**, Summer School Program *Melbourne, Australia*

2014 **The Learning Progress Award in Tsinghua University**, Top 30% *Beijing, China*