

Wang Zhu

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SKILLS/ABILITIES

Python Java C/C++ Swift Git Deep Learning

WORK & RESEARCH EXPERIENCE

May 2018 – **Research Assistant (Full time)**, *Simon Fraser University*

Aug 2018 Computing Logic Lab, Advisor: Prof. Oliver Schulte

Research in Deep Reinforcement Learning and Sports Logic

- Implemented LSTM neural network using Tensorflow for sports data prediction
- Implemented LMT (Linear Model Tree) for Flappy Bird game interpretation

Sep 2017 – **Research Assistant (Part time)**, *Simon Fraser University*

Apr 2018 Computing Logic Lab, Advisor: Prof. Oliver Schulte

Research in Deep Learning and National Hockey League (NHL) data

- Extracted Q-value of NHL data from neural network
- Read papers of Deep Learning

SELECTED PERSONAL PROJECTS

2018 **Teacher Searching App**, *GitHub*

- Developed the front end of the iOS App “Teacher Searching System” using Swift
- Used MVC structure and *SwiftGifOrigin* open source package to design
- Designed navigation maps and compare radar graphs to select specific teachers
- Collaborate with students in other countries in different time zone

2018 **DRL Ice Hockey**, *GitHub*

- Trained a Tensorflow LSTM neural network to estimate player ranking in ice hockey
- Used Mimic Learning to learn U-Trees from neural network to explain the ranking
- Wrote a detailed readme for further sports data of NBA and soccer

2018 **Pika Compiler**, *GitHub*

- Developed the whole part of a compiler except optimization from Pika language to a stack-based assembly using Java 8
- Used a top-down parser and two semantic analyzers to make sure correct analysis of functions and global variables

2016 **MIPS Assembler**, *GitHub*

- Developed an assembler to convert MIPS assembly to machine code in C++
- Used Qt platform to design front end UI and APIs (in C++)
- Integrated a disassembler with the assembler

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EDUCATION

2017 – now **Simon Fraser University, Vancouver, BC, Canada**

- B.Sc in Computing Science, Dual Degree Program exchange. GPA: 4.17/4.33

2015 – now **Zhejiang University, Hangzhou, Zhejiang, China**

- B.Sc in Computer Science & Technology. GPA: 3.93/4.00

AWARDS & SCHOLARSHIP

May 2018 **Undergraduate Student Research Awards, Issued by Simon Fraser University**

- The award to praise and encourage research assistants with financial support from both the host university and the advisor

Sept 2017 **SFU Entrance Scholarship, Issued by Simon Fraser University**

- Entrance award valued at \$10000 for academically outstanding students for the first two years' study in Zhejiang University

Feb 2017 **The Mathematical Contest in Modeling,**

Issued by COMAP (the Consortium for Mathematics and Its Applications)

- Acted as the group leader, won the Meritorious Prize in the four-day contest amongst over 3000 teams.

Oct 2016 **China National Scholarship, Issued by Zhejiang University**

- China National Scholarship in Zhejiang University for top 1% students in the major

Apr 2016 **Mathematical Calculus Contest, Issued by Zhejiang University**

- First Prize in non-mathematics group

Apr 2016 **Electronic Design Contest, Issued by Zhejiang University**

- Third Prize in the engineer group

PUBLICATIONS

Jun 2018 **Toward Interpretable Deep Reinforcement Learning with Linear Model U-Trees.**

Guiliang Liu, Oliver Schulte, Wang Zhu and Qingcan Li

- In European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML-PKDD 2018)
- An interpretable approach to approximate neural network predictions

Jul 2018 **Interpreting Deep Sports Analytics: Valuing Actions and Players in the NHL.**

Guiliang Liu, Wang Zhu and Oliver Schulte

- In the 5th Machine Learning and Data Mining for Sports Analytics Workshop at ECML-PKDD (MLSA, ECML-PKDD 2018)
- A Mimic Learning Framework to interpret the action values from a DRL model

ADDITIONAL EXPERIENCE

Aug 2016 **Participated in SQTP (Students Quality Training Project).**

- Undertook information gathering work