MUXING WANG

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EDUCATION

University of Edinburgh, the UK **September 2021-- Present**
Master of Science in Statistic and Operational Research

- First Class grade in all courses, including Fundamentals of Optimization, Fundamentals of Operational Research, Bayesian Theory, Statistical Programming, Generalized Regression Models, Causal Inference, Probabilistic Modelling and Reasoning, and Reinforcement Learning, etc.
- Currently working on a dissertation that uses INLA (Integrated Nested Laplace Approximation) to predict outcomes of basketball games.

University of Waterloo, Canada **September 2015 - January 2020**
Bachelor of Computer Science

- A/A+ in courses: Artificial Intelligence, Machine Learning, Algorithms, Generalized Linear Models, Mathematical Statistics, Forecasting, Advanced Calculus, and Data-Intensive Distributed Computing.

SKILLS

- Fluent in Python, R; Familiar with Scala, C++, MATLAB.
- IELTS: 8.0

PROJECTS

BFGS OPTIMIZER, Statistical Programming **November 2021**

- Implementation of BFGS quasi-Newton optimization method.
- https://github.com/leafstar/Statistical-Programming/blob/main/wg03p4.R

CONSULTANT ALLOCATION, Edinburgh **Nov 2021 – Dec 2021**

- Investigated a consultant allocation problem with Mixed-Integer-Programming.
- Define optimization model with Guroubi solver in Python.
- https://github.com/leafstar/MMCS_Project

REINFORCEMENT LEARNING COURSEWORK, Edinburgh **Feb 2022 – Apr 2022**

- Implemented DQN, REINFORCE, Value Iteration, DDPG, and joint action learning.
- Average return of 280+ for OpenAI gym Bipedal Walker.
- Average return of 250+ for OpenAI gym Lunar-Lander.

EXPERIENCE

JIANGSU XINWANG SOFTWARE TECHNOLOGY CO., LTD., Nanjing **Aug 2020 – June 2021**
Data Scientist

- Participated in developing a high-performance Big Data platform, which deals with spatial-temporal big data.
- Researched algorithms related to urban computing projects, such as Map Matching Algorithm which is based on Hidden Markov Model and Viterbi Algorithm.
- Wrote Spark/SparkSQL to find the best traveling sequence in a city based on Point of Interest and mobile signaling data.
- Tools: Scala, Spark, Hive.

BIOINFORMATICS SOLUTIONS INC., Waterloo **May 2019 – Aug 2019**
Software Developer

- Responsible for Peaks Studio's maintenance and development, GUI maintenance and development, and code debugging. Language: JAVA

BIO-X INSTITUTE, SHANGHAI JIAO TONG UNIVERSITY, Shanghai **May 2018 – Aug 2018**
Research Assistant

- Wrote Python/R/SQL scripts to preprocess the data: to merge the data from different medical systems and handle the missing data to generate complete and healthy datasets.
- Used various machine learning models such as Logistic regression and Random Forest to predict the next visits of patients.
- Overall prediction accuracy of the next visit is about 70%~80%, and the accuracy of the elder group (age 60+) is higher than the younger group by 5%.

INTERESTS AND AWARDS

- *Interests: Reinforcement Learning, Probabilistic Models, Chinese calligraphy, History, and Soccer.*
- Dean's Honors List, the University of Waterloo, 2018
- Faculty of Mathematics Scholarship, the University of Waterloo, 2016-2017
- Top 0.7% worldwide in Euclid Mathematics Contest