Dr Mengyan Zhang

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EDUCATION

Ph.D. in Machine Learning:

Adaptive Recommendations with Bandit Feedback (awarded in 2023.02) Computational Media Lab, The Australian National University, 2018.08- 2023.02 Machine Learning Research Group, Data61, CSIRO, 2018.08- 2023.02

Bachelor of Computer Science (first class honours)

The Australian National University and Shandong University, 2+2 joint degree, 2014-2018, GPA 6.938/7.0

WORK EXPERIENCE

Postdoctoral Researcher

Computational Statistics and Machine Learning, Department of Computer Science, University of Oxford, 2023.04 -

Research Assistant

Vollmer Research Group, RPTU Kaiserslautern and German Research Center for Artificial Intelligence (DFKI), 2022.10 - 2023.4

Research Internship

Social Computing Lab, Microsoft Research Asia, 2021.10 - 2022.03, worked on deep contextual bandits for news recommendation.

Academic Tutor

Australian National University, paid teaching position, 2019-2021, total working hours: 300h

RESEARCH INTERESTS

Sequential decision-making in machine learning in theory and practice: (I) Designing robust algorithms to handle imperfect feedback and understand causal relationships in sequential decision-making. (II) Designing decision-making algorithms to solve real-world problems in various areas, for example, synthetic biology, global health, survey design, and public policy.

PUBLICATIONS/ PRE-PRINTS

Adaptive Recommendations with Bandit Feedback

Mengyan Zhang (2023). PhD thesis (Supervisors: Cheng Soon Ong, Lexing Xie, Eduardo Eyras)

Gaussian Process Bandits with Aggregated Feedback

Mengyan Zhang, Russell Tsuchida, Cheng Soon Ong (2022). AAAI Conference on Artificial Intelligence.

Machine learning Guided Batched Design of a Bacterial Ribosome Binding Site

Mengyan Zhang, Maciej Bartosz Holowko, Huw Hayman Zumpe, Cheng Soon Ong. (2022). ACS Synthetic Biology Journal.

Two-Stage Neural Contextual Bandits for Personalised News Recommendation

Mengyan Zhang, Thanh Nguyen-Tang, Fangzhao Wu, Zhenyu He, Xing Xie, Cheng Soon Ong (2022). Under Review.

Quantile Bandits for Best Arms Identification

Mengyan Zhang, Cheng Soon Ong. (2021). International Conference on Machine Learning.

Opportunities and Challenges in Designing Genomic Sequences

Mengyan Zhang, Cheng Soon Ong (2021). ICML Workshop on Computational Biology.
 Classification of Historical Death and Occupation coding
 Mengyan Zhang (2018). Honours thesis. (Supervisors: Peter Christen, Timothy Graham)

OPEN SOURCE

Acton: Active Learning Library for Knowledge Graph Matthew Alger, Mengyan Zhang, Cheng Soon Ong. (2018). Python software

AWARDS

2019 Data61 Top-up Postgraduate Research Scholarship
2018 PhD Scholarship of ANU
2018 ANU HDR Fee Remission Merit Scholarship
2017 Paul Thistlewatte Memorial Honours Year Scholarship of ANU
2015-2016 National Scholarship (China)

TALKS/PRESENTATIONS

Jun. 2022: ANU AI-ML-Friends seminar (PhD Completion Talk) Slides: Adaptive Recommendations with Bandit Feedback

Feb. 2022: Microsoft Research Asian Social Computing Group Seminar Slides: Bandits in Recommendation System

Dec. 2021: WiML workshop in NeurIPS Poster presentation: Gaussian Process Bandits with Aggregated Feedback

Jul. 2021: ICML Workshop on Computational Biology Spotlight Talk: Opportunities and Challenges in Designing Genomic Sequences

Jul. 2021: Thirty-ninth International Conference on Machine Learning Poster presentation: Quantile Bandits for Best Arms Identification

Jul. 2020: Machine Learning Summer School (acceptance rate: 13.84%) Poster presentation: Quantile Bandits for Best Arms Identification

TEACHING

Guest lecturer at RMIT Bioinformatics and Multi-omics data analysis (BIOL 2524) : introduction to ML and applications in biology (remotely, 3 lectures, May 2023) Tutor for COMP8600 Statistical Machine Learning (S1 2019, S1 2020, S1 2021) Tutor for COMP6670 Introduction to Machine Learning (S2 2020)

TECHNICAL SKILLS

Programming: Python (familiar with PyTorch), Java, C#, C++ Language: Chinese, English Others: Git, LATEX

<u>REFEREE</u>

Prof. Seth Flaxman

Assoicate Professor in Department of Computer Science at University of Oxford seth.flaxman@cs.ox.ac.uk

Dr. Cheng Soon Ong

Senior Principal Research Scientist, Director of ML and AI future science platform at CSIRO chengsoon.ong@anu.edu.au