LEIJIE WANG

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acornagain.github.io/leijiewang.github.io

EDUCATION

Tsinghua University, Department of Computer Science and Technology Beijing, China
Candidate for Bachelor of Engineering 09/2017 – 07/2022

- GPA 3.89/4.00, Ranked 6/225
- **Tsinghua Presidential Scholarship** (Highest honor awarded to 10 undergraduates every year)
- Admitted as the highest scorer among 300,000 students in the National College Entrance Examination (Gaokao)
- Courses**:** Calculus A I/II (A/A-), Linear Algebra I/II (A+/A), Discrete Mathematics I/II (A/A), Probability and Statistics (A), Data Structure (A), Introduction to Artificial Intelligence (A-)

Oxford University, New College Oxford, United Kingdom
Visiting Student in Computer and Philosophy 10/2019 – 06/2020

- GPA 4.00/4.00; Admitted with full scholarship
- Courses**:** Ethics (A-), Practical Ethics (A-), General Philosophy (A-), Philosophical Logic (A), Computer Architecture (A), Compilers (A)

RESEARCH INTERESTS

Social Computing; Human-centered Machine Learning; Computer-Supported Cooperative Work; Fairness, Accountability, and Transparency

PUBLICATIONS AND MANUSCRIPTS

Leijie Wang, Steven Wu, Haiyi Zhu. How Are Machine Learning Based Online Content Moderation Systems Actually Used? Studying Community Size, Local Activity, and Disparity Treatment. *Pre-print*

Will Epperson, Doris Jung-Lin Lee, **Leijie Wang**, Kunal Agarwal, Aditya Parameswaran, Marti Hearst, Dominik Moritz, Adam Perer. Visualization Recommendation with Analysis History. ***Under review*** of EuroVis'22

RESEARCH EXPERIENCE

Data Interaction Group (DIG), *Carnegie Mellon University* Pittsburgh, USA
Supervisors: Adam Perer and Dominik Moritz 06/2021 – Present

Project: Visualization Recommendation with Analysis History

- Aimed to recommend graphs to users by tracking the history of their analysis in the process of data exploration
- Enhanced the recommendation system to make recommended graphs more informative and robust; Tracked the history of all commonly used Pandas functions and created new visualizations for these functions; Implemented unit tests to facilitate the system maintenance
- Created a user study procedure that asks participants to perform exploratory data analysis by our tool and evaluate its performance

Social AI Group, *Carnegie Mellon University* Pittsburgh, USA
Supervisors: Haiyi Zhu and Steven Wu 06/2020 – Present

Project 1: Facilitating Public Deliberation of Algorithmic Decisions

- Aimed to help Wikipedia members address their competing values about a moderation algorithm through organized deliberation sessions. More details are available on the project wiki page
- Designed an interactive interface to help Wikipedians better understand tensions among values of different stakeholders, select their preferred model, and share that model with others for further discussion; Ran deliberation-driven workshops in English and Dutch-speaking Wikipedia communities

Project 2: Exploring the Actual Use of Algorithmic Flagging Systems in Wikipedia

- Aimed to understand how community norms influence people's actual use of content moderation algorithms; Provided a field evaluation of an ML-based algorithm in the socio-technical context of Wikipedia
- Constructed a dataset from Wikipedia archives and exploited a causal inference method to identify several socio-technical factors that influence the actual use of algorithms in various communities, namely membership size and local edit activity

Project 3: Incorporating Fair Algorithms into the Python Toolkit FairLearn

- Aimed to empower non-experts to access and deploy algorithms with fairness guarantees
- Implemented the fair regression algorithm proposed in the paper Agarwal et al. and helped organize separate fair algorithms into a structured toolkit; Wrote API documentations and unit tests to increase accessibility

Knowledge Engineering Group (KEG), *Tsinghua University* Beijing, China
Supervisor: Tang Jie 10/2018 – 07/2019

Project: Exploring Recommendation Algorithms Based on Networking Embedding Theories

- Aimed to improve recommendation algorithms for WeChat's Top Stories feature
- Cleansed data and implemented several recommendation algorithms from prior research to further our understanding of the large dataset

SELECTED AWARDS AND HONORS

- **Tsinghua Presidential Scholarship, Tsinghua University** 2020
  Highest undergraduate scholarship awarded by Tsinghua University; Top 10 out of 3000+ undergraduates
- **Finalist Award in the Mathematical Contest in Modeling** 2020
  Awarded to top 1% of all teams
- **Yinghua Scholarship, Tsinghua University** 2019
  Full scholarship for one-year exchange program at University of Oxford, $66,000 in total
- **Jiang Nanxiang Scholarship, Tsinghua University** 2019
  Awarded for overall excellence, top 1% of all students
- **The First Prize Scholarship for 2017 Freshmen, Tsinghua University** 2017
  Awarded for the highest scorer among 300,000 students in the National College Entrance Examination

ADDITIONAL INFORMATION

Programming Skills

- Python, HTML/CSS/JavaScript, C/C++, Java, R, MATLAB, LaTeX

Languages

- Native in Mandarin; Fluent in English
- TOFEL score 113 (Reading 30, Writing 29, Listening 29, Speaking 25)
- GRE score 338 (Verbal 165, Quantitative: 169, Analytical Writing: 4.0)
- Duolingo score 140