Amanda Bower

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OBJECTIVE

I am seeking a full-time position as a machine learning scientist. I want to apply my theoretical knowledge of machine learning along with my practical experience to tackle business problems with data driven answers.

EDUCATION

PhD Candidate in Applied and Interdisciplinary Mathematics Expected: ***Fall 2020***

University of Michigan (UM-Ann Arbor), Ann Arbor, MI

Thesis topics: machine learning, algorithmic fairness, preference learning, ranking

Selected papers and preprints:

- *Preference Modeling with Context-dependent Salient* Features with L Balzano, ICML 2020.
- *Training Individually fair ML models with sensitive subspace robustness with* M Yurochkin and Y Sun, ICLR 2020.

M.S. in Applied and Interdisciplinary Mathematics ***May 2017***

University of Michigan, Ann Arbor, MI

B.S in Mathematics with minors in Statistics and Computer Science ***May 2013***

University of Michigan-Dearborn (UM-Dearborn), Dearborn, MI

SELECTED PROJECTS AND WORK EXPERIENCE

Research Mentor **UM-Ann Arbor** ***Summer 2020***

- Co-mentored 3 undergraduates & a masters student on an algorithmic fairness project

Machine learning researcher, Intern **Netflix** ***Summer 2019***

- Audited content demand models for algorithmic bias and wrote an internal report for how to think about algorithmic bias at Netflix

Graduate Student Instructor **UM-Ann Arbor** ***Fall 2018***

- For a graduate level machine learning course: held office hours, organized and taught a python tutorial, graded exams, and answered questions on an online forum.

Poster Contest Organizer **Midwest Machine Learning Symposium** ***July 2017***

- Designed, ran, and implemented code for a graduate student poster contest using rank aggregation algorithms.

Math and Art Course Assistant **UM-Ann Arbor Math and Science Scholars** ***July 2017, 2018***

- Mentored talented high school students to solve math and art problems.

Applied Math Researcher, Project Manager **UCLA** ***Summer 2013***

- Led team to improve the USC Shoah Foundation search algorithm for video testimonies of survivors of the Holocaust and other genocides designing and implementing algorithms influenced by PageRank and SVMs.

Math Researcher **Williams College** ***Summer 2012***

- Solved probability and number theory problems resulting in three publications and several oral presentations.

SELECTED HONORS AND AWARDS

- **National Science Foundation Graduate Research Fellowship**: ~$130,000; ~14% acceptance rate (2015-2019).
- **UM-Ann Arbor Rackham Merit Fellowship**: ~$45,000 (2014).
- **UM-Ann Arbor Carroll V. Newsom Scholarship**: ~$6000 awarded by the Department of Mathematics (2014).
- **UM-Dearborn Chancellor's Medallion**: Awarded to top 9 graduating students (2013).
- **UM-Dearborn Chancellor's Scholarship**: Full tuition of ~$40,000 (2009-2013).

TECHNICAL WORKSHOPS ATTENDED

- **Fundamentals of Data Analysis**: University of Wisconsin – Madison (2018)
- **Representations of High Dimensional Data**: Mathematical Sciences Research Institute at UC-Berkeley (2018)
- **Fair Interactive Learning & Fair Representations**: Computing Community Consortium workshop (2018)
- **Trustworthy Algorithmic Decision Making**: NSF workshop (2017)

TECHNICAL SKILLS

Languages: Python, LaTeX, Shell; Exposure to: SQL, C++, C#, JavaScript