

ABEER KHAN, Masters (Computer Science)

abeer.khan@uwaterloo.ca / www.linkedin.com/in/abeerkhan96

EDUCATION

Master's in Computer Science, University of Waterloo, Sep 2017 - Aug 2019

- CGPA 87.75
- TA for Machine Learning, Database Management, Big Data Analytics
- Teach tutorials on Data Analytics | Guest lectured class of 15 graduate students on graph mining

Bachelor of Information Technology, IIIT-A, Jul 2013 - Jun 2017

- CGPA 9.20, Dean's Merit List 2017

Coursework: Data Structures, Algorithms, Object Oriented Methods, Machine Learning, Data Cleaning, Artificial Intelligence, Data Mining & Warehousing

RELEVANT EXPERIENCE

Research assistant, Data Systems Lab, University of Waterloo, Sep 2017 - Aug 2019

Gendered Movements in Reddit

- Discovered gender issues being discussed by MensRights, Feminism with topic models.
- Discovered other interests people involved in these movements have with word embedding and Latent Semantic Analysis based methods

Gender Differences in Undergraduate Engineering

- Discovered differences in reasons, backgrounds of engineering applicants with machine learning (with Google's word2vec, Question Answering) and clustering (K-Means) in **Python**
- Presented at Waterloo Data Science and Engineering [meetup](#) with 90 attendees
- Selected for poster presentation at Canadian Celebration of Women in Computing-2018, recognized by [Globe & Mail](#), CBC radio, published in [Educational Data Mining](#)-2018

Compact Group Discovery in Attributed Graphs

- Discovered compact communities in Github network (500K nodes, 8M edges), and DBLP network (of 1M nodes, 3.3M edges) with new clustering algorithm that extracts "interesting" groups in **Java**

Data Science Intern, Paderborn University, Germany, May - Jul 2016

- Collaborated with cylinder company to improve production quality by analysing cylinders dataset with different methods like Principal Component Analysis in **Python**

PROJECTS

Gender Differences in Co-operative Education, Jan - Apr 2019

- Analyzed (numeric) performance evaluations, and supervisor feedback forms to discover gender differences in co-op experiences

Domain Pruning in HoloClean, Sep - Dec 2017

- Pruned away less likely values that could be assigned to an erroneous cell in a database to repair it using iterative regression, record linkage, association rule mining.
- Tested on [HoloClean](#), an open source machine learning system to impute, clean, and enrich data

Mission Planning in Artificial Intelligence, Jun 2016

- Formulated an algorithm to find best path to reach a set of ordered goals subject to randomness in being able to reach those goals using Genetic Algorithms in **C++**
- Improving algorithmic complexity from exponential to linear

PUBLICATIONS

- **Khan, A.** (2019). Text Mining to Understand Gender Issues: Stories from The Red Pill, Men's Rights, and Feminism Movements (**Master's thesis**, University of Waterloo).
- **Khan, A.**, Golab, L., Kargar, M., Szlichta, J., & Zihayat, M. (2019). Compact group discovery in attributed graphs and social networks. Information Processing & Management, 102054.
- Chopra, S., **Khan, A.**, Mirsafian, M., & Golab, L. (2019). Gender Differences in Science and Engineering: A Data Mining Approach. In EDBT/ICDT Workshops.
- Chopra, S., **Khan, A.**, Mirsafian, M., & Golab, L. (2019). Gender Differences in Work-Integrated Learning Assessments. Educational Data Mining.
- Chopra, S., Gautreau, H., **Khan, A.**, Mirsafian, M., & Golab, L. (2018). Gender Differences in Undergraduate Engineering Applicants: A Text Mining Approach. International Educational Data Mining Society.
- Kala, R., **Khan, A.**, Diksha, D., Shelly, S., & Sinha, S. (2018, July). Evolutionary Mission Planning. In 2018 IEEE Congress on Evolutionary Computation (CEC) (pp. 1-8). IEEE.

EXTRACURRICULAR ACTIVITIES

- Panelist for [StarterHacks](#) Women in Tech, Jan 2019
- Participated in Data for Good-Waterloo [datathon](#) to help local non profit analyze their data, Jun 2019
- Talk on “Solving Practical Problems with Research”, Waterloo Mathematics Undergraduate Research Conference, Sep 2019
- Participated in Grace Hopper Open Source Day working with non profit Oppia, Oct 2018
- Social Coordinator, Treasurer of Math-Graduate Student Association during Masters, 2017
- Secretary of student welfare council during Bachelors, 2015
- Organiser of CodeShow - coding contests for about 400 students during Bachelors, 2014

AWARDS

- University of Waterloo Entrance Scholarship, 2017
- Recipient of SPDC merit scholarship for four years (\$4K) during Bachelors, 2013 - 2017