Pratheeksha Nair

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SUMMARY

- PhD candidate at MILA and McGill University, supervised by Prof. Reihaneh Rabbany
- Interested in using Machine Learning for solving socially relevant problems
- Experienced in topic modelling, clustering and recommender systems
- Currently focusing on Active Learning for graphs with potential applications in identifying sex trafficking
- Passionate about mentoring junior students and increasing awareness of research opportunities

ACADEMIC ACHIEVEMENTS

Degree	University	Specialization	Year	Total
PhD	McGill University, Canada	Computer Science	2019-present	3.87/4.0
Integrated Master's	IIIT Bangalore, India	Computer Science Engineering	2014-2019	3.6/4.0

PUBLICATIONS

- Rameshwar Pratap, Anup Deshmukh, **Pratheeksha Nair**, Anirudh Ravi, Scaling up Simhash, *In the Proceeding of Machine Learning Research (ACML 2020)*
- Yue Li, **Pratheeksha Nair**, Zhi Wen, Imane Chafi, et al, Global Surveillance of COVID-19 by mining news media using a multi-source dynamic embedded topic model, *ACM Conference on Bioinformatics, Computational Biology and Health Informatics (ACM-BCB 2020)*
- Arnab Kumar Mondal, **Pratheeksha Nair**, Kaleem Siddiqi, Group Equivariant Deep Reinforcement Learning, *Inductive Biases, Invariances and Generalization in RL (ICML 2020)*
- Yue Li, **Pratheeksha Nair**, Xing Han Lu, Zhi Wen, Yuening Wang, et al, Inferring multimodal latent topics from electronic health records, *Nature Communications volume 11, Article number: 2536 (2020)*
- **Pratheeksha Nair**, Anup Deshmukh, Shrisha Rao, A Scalable Clustering Algorithm for Serendipity in Recommender Systems, *In the Workshop Proceedings of the 18th IEEE International Conference on Data Mining (ICDM 2018)*
- Rameshwar Pratap, **Pratheeksha Nair**, Anup Deshmukh, Tarun Dutt, Fast and Provable Concept Decompositions in Large Text Corpus, *In the Proceedings of Machine Learning Research (ACML 2018)*

SKILLS

Python ●●●●○ **Pytorch** ●●●○○ **Numpy, Pandas** ●●●●● **Object-Oriented Programming** ●●●●○ **LATEX** ●●●●○
Communication ●●●●● **Project Planning** ●●●●○ **Time Management** ●●●●● **Active Listening** ●●●●●

RESEARCH PROJECTS

- **Active Learning for Graphs - McGill University, Montreal** (Work in Progress)
  - Conducting a literature review of Active Learning (learning from limited samples) for graphs
  - Focusing on specific socially relevant applications
  - Potential application for helping law enforcement identify sex trafficking rings from online escort advertisements
- **Mortality prediction on Electronic Health Records from hidden topics - McGill University, Montreal**
  - Organized experiment settings based on expert reviewer feedback
  - Modified an existing implementation and executed a carefully curated list of experiments
  - Organized and presented results in a coherent manner
- **Improving Validity of Machine Generated Drugs - Master's thesis at IIIT Bangalore**
  - Solely worked on identifying and establishing the research problem statement
  - Proposed a novel checking strategy to improve the validity of results from existing methods
  - Organized, wrote and presented the thesis
- **Automatic Summarization of Code - Internship at IBM Research AI Lab, India**
  - Introduced a novel application of automatic text summarization models to code
  - Worked in a team of five senior researchers and held weekly brain-storming sessions
  - Presented the technical project in under five minutes and as a poster

LEADERSHIP EXPERIENCE

- **Head of events and Mentor - WISR India (2019 - present)**
  - Designed, planned and organized events for WISR (Women in STEM Research) India
  - Mentor in the WISR mentorship program for young Indian women undergraduates interested in exploring research in STEM
- **VP Finance at McGill Chapter for Scientista (2020 - present)**
  - Manage finance and audits for the Scientista chapter at McGill
- **Mentor at Office for Student Disabilities (OSD) at McGill University (Fall 2020)**
  - Mentoring a McGill University senior
  - Selected to become a mentor for students registered in OSD
- **Teaching Assistant (2018-2020)**
  - Held clarifying sessions for Introduction to Computer Systems (Winter & Fall 2020 at McGill University)
  - Curated a list of course projects and graded the Programming Languages course (2019 at IIITB)
  - Conducted tutorial sessions and developed project ideas for a class of size 100+ in ML 101 course (2018 at IIITB)
- **Curator at TEDx IIITB (2018)**
  - Communicated with three TEDx speakers to discuss the contents of their speeches
  - Curated their speeches to be best tailored for the event
  - Ensured efficient communication between the speakers and the event hosts in the form of reminders and updates
- **Mentor at the Student Mentoring Program of IIITB (2017-2018)**
  - Mentored three freshman year students and helped them transition to college life
  - Actively listened to their concerns and problems regarding academics
  - Helped them set short-term goals and encouraged them to step out of their comfort zones
- **Co-leader of the Dance club at IIITB (2018)**
  - Planned and choreographed dance routines for annual college events
  - Supervised a crew of 4 to 10 dancers and oversaw two flash mobs of 15+ students
- **Leadership positions during high school(2013-2014)**
  - Co-planned 10+ competitions and managed a group of event heads for inter-school cultural festival San Revo
  - Managed house finances and organized events in the capacity of vice captain of the house with 300+ students

ACHIEVEMENTS

- **Computer Science Teaching Assistant Award** (Fall 2020, McGill University) – Recognized for inspiring and challenging undergraduate students. One among 45 TAs nominated for the award by students.
- **Dean's Merit List** (IIIT-B, 2019) – Recognized for academic excellence on graduating with 3.6/4.0 GPA.
- **GHCI Student Scholar 2018** – Scholarship to attend India's largest gathering of women technologists produced by AnitaB.org and ACM India.
- **World Rank 23/1500** (Adobe CODHERS Codesprint 2016) – 21st place in India
- **World Rank 49/2500** (Women's CodeSprint 2016) – 19th place in India
- **World Rank 7/1000+** (HackerRank Women's Cup 2015) – 3rd place in India. Featured in a YourStory article.