# Pratheeksha Nair

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## ABOUT ME

PhD student of Computer Science at McGill University under the guidance of Prof. Yue Li. Interested in pursuing research in **AI** and **ML** with applications to healthcare.

## ACADEMIC ACHIEVEMENTS

| Degree | University | Specialization | Year | Total |
|---|---|---|---|---|
| PhD | McGill University | Computer Science | 2019-present | 3.79/4.0 |
| Integrated Master's | IIIT Bangalore | Computer Science Engineering | 2014-2019 | 3.6/4.0 |
| High School | Indian School Certificate | Mathematics and Science | 2014 | 95.6/100.0 |

## PUBLICATIONS

- **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)*

## TECHNICAL SKILLS

**Languages** (C++, Python), **Tools** (LaTeX, Matlab), **Libraries** (Keras, Pytorch)

## RESEARCH EXPERIENCE

- **Exploring Validity in Machine Generated Drugs - Master's thesis at IIIT Bangalore**
  *(Guide: Prof. Dinesh Babu, Aug'18 - present)*
  Generation of valid SMILES representation of molecules as a problem of semantic and syntactic sequence generation. These molecules are manifested as drugs with certain desired properties.
- **Method Summarization from Code - Internship at IBM Research AI Lab, India**
  *(Guide: Rahul A R, May'18 - Aug'18)*
  Applied sequence to sequence deep models to solve problems prevalent in Software Engineering. One particular use-case is the automatic generation of comments from code.
- **Scaling up Simhash - Collaboration with Prof. Pratap from IIT Mandi**
  *(Guide: Prof. R Pratap, Jan'18 - May'18)*
  Proposed a dimensionality reduction sketching algorithm - simsketch - which maintains an estimate of the cosine similarity between original real valued vectors.

## ACADEMIC PROJECTS

- **Word Embeddings for Medical Domain** *(Guide: Prof. G S Raghavan, Aug'18 - Dec'18)*
  Generating word embeddings specifically for medical terms making use of hierarchical ontologies in medicine.
- **Refreshable Braille Reader on Arduino Teensie** *(Guide: Prof. Sujit Kumar, Aug'18 - Dec'18)*
  Worked on a text-to-Braille converter that runs on microcontrollers like Arduino.

## ACHIEVEMENTS

- **Dean's Merit List** (IIIT-B)
  Recognized for my academic excellence by graduating with 3.6/4.0 GPA
- **GHCI '18 Student Scholar**
  Scholarship to attend India's largest gathering of women technologists produced by AnitaB.org and ACM India.
- **World Rank 7** (HackerRank Women's Cup 2015)
  $7^{th}$ rank out of 1000+ participants in the world. $3^{rd}$ place in the country. Featured in a YourStory article.
- **World Rank 23/1500** (Adobe CODHERS Codesprint 2016) – $21^{st}$ place in India
- **World Rank 49/2500** (Women's CodeSprint 2016) – $19^{th}$ place in India

## OTHER ACTIVITIES

- Teaching Assistant for Programming Languages course (2019)
- Teaching Assistant for ML 101 course (2018)
- Curator at TEDx IIITB (2018)
- Mentor at the Student Mentoring Program of IIITB (2017-2018)
- Active member of the Dance Club of IIITB (2016-2019)