

Pratheeksha Nair



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ABOUT ME

PhD student of Computer Science at McGill University. Interested in pursuing deep research in the emerging fields of AI and ML.

ACADEMIC ACHIEVEMENTS

Degree	University	Specialization	Year	Total
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

PAPER 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), **Database** (MySQL), **Tools** (L^AT_EX, Matlab), **Libraries** (Tensorflow, Keras, Pytorch)

RESEARCH EXPERIENCE

- **Exploring Validity in Machine Generated Drugs - Master's thesis at IIIT Bangalore**
(Guide: **Prof. Dinesh Babu**, Aug'18 - present)
This work looks at 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)
This work involves using sequence to sequence deep models to solve problems prevalent in Software Engineering. One particular use-case is the automatic generation of comments from code.
- **Detection of star clusters using Pattern Analysis - Indian Institute of Space Science and Technology (IIST)**
(Guide: **Prof. Sarita Vig**, May'17 - July'17)
Worked on a direct application of pattern analysis techniques for a highly relevant problem statement in astrophysics. Used the K-Nearest Neighbor algorithm for density estimation and detection of star clusters.
- **Scaling up Simhash**
(Guide: **Dr R Pratap**, Jan'18 - May'18) - Currently under review at a top tier AI conference
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)
Worked on 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)
7th rank out of 1000+ participants in the world. 3rd place in the country. Featured in a **YourStory** article.
- **World Rank 23/1500** (Adobe CODHERS Codesprint 2016) – 21st place in India
- **World Rank 49/2500** (Women's CodeSprint 2016) – 19th 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)