

# Pratheeksha Nair



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## ABOUT ME

Masters student of Computer Science and Engineering at IIIT-B. 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	3.56/4.0 (till date)
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 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, C++, Python), **Database** (MySQL), **Tools** (L<sup>A</sup>T<sub>E</sub>X, Matlab), **Libraries** (Tensorflow, Keras, Pytorch)

## RESEARCH EXPERIENCE

- **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)  
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 - present)  
Working 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 - present)  
Working on a text-to-Braille converter that runs on microcontrollers like Arduino.

## ACHIEVEMENTS

- **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<sup>th</sup> rank out of 1000+ participants in the world. 3<sup>rd</sup> place in the country. Featured in a **YourStory** article.
- **World Rank 23** (Adobe CODHERS Codesprint 2016)  
23<sup>rd</sup> rank out of 1500+ participants all over the world. 21<sup>st</sup> place in the country.
- **World Rank 49** (Women's CodeSprint 2016)  
49<sup>th</sup> rank out of 2500+ participants all over the world. 19<sup>th</sup> place in the country.

## OTHER ACTIVITIES

- Teaching Assistant for GEN 511 ML course (2018)
- Mentor at the Student Mentoring Program of IIITB (2017-2018)
- Curator at TEDx IIITB (2018)
- Active member of the Dance Club of IIITB (2016-2019)

## REFERENCES

**Prof. Shrisha Rao** - Professor at IIIT-B ([srao@iiitb.ac.in](mailto:srao@iiitb.ac.in))  
**Prof. Dinesh Babu** - Assistant Professor at IIIT-B ([jdinesh@iiitb.ac.in](mailto:jdinesh@iiitb.ac.in))  
**Prof. Sujit Kumar Chakrabarti** - Assistant Professor at IIIT-B ([sujitkc@iiitb.ac.in](mailto:sujitkc@iiitb.ac.in))