

## Contact

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[www.linkedin.com/in/pnair96](https://www.linkedin.com/in/pnair96)  
(LinkedIn)  
[nair-p.github.io/](https://nair-p.github.io/) (Personal)

## Top Skills

Collaborative Problem Solving  
Python (Programming Language)  
Interdisciplinary Collaboration

## Languages

Malayalam (Native or Bilingual)  
English (Full Professional)  
Hindi (Limited Working)  
Tamil (Elementary)

## Honors-Awards

World Rank 49 in Women's Code Sprint 2016  
World Rank 23 in Adobe CODHERS Codesprint 2016  
World Rank 7 in HackerRank Women's Cup 2015  
GHCI 2018 Student Scholarship Award  
Microsoft Research Student Travel Grant

## Publications

A Scalable Clustering Algorithm for Serendipity in Recommender Systems  
Fast and Provable Concept Decompositions in Large Text Corpus  
Group Equivariant Deep Reinforcement Learning  
Inferring multimodal latent topics from electronic health records

# Pratheeksha Nair

Pursuing PhD in Computer Science | Graph Machine Learning & Weak Supervision | Seeking opportunities to solve real-world problems using AI  
Montreal, Quebec, Canada

## Summary

Creative, self-motivated and passionate student working towards PhD in Computer Science at McGill University, Montréal. Aiming to use my programming, designing and problem solving abilities to study and develop top quality software that benefits society and IT. Inclined towards a career of research in the field of Artificial Intelligence.

My areas of interest include applications of Machine Learning and Deep Learning algorithms for social good. I am very enthusiastic about the research possibilities existing in the field of AI for I believe we have hardly scratched the surface. Looking for opportunities to solve social problems using AI.

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## Experience

McGill University  
PHD Candidate  
September 2019 - Present (5 years 2 months)  
Montreal, Quebec, Canada

Building Machine Learning methods for detecting organized crime, such as human trafficking, from online escort advertisements.

International Institute of Information Technology Bangalore -  
Multimodal Perception Lab  
3 years 3 months

Student Researcher  
January 2018 - July 2019 (1 year 7 months)  
Bangalore

Explored the following problems:

1. Generation of valid SMILES molecules using deep generative models (Master's thesis) - worked on improving the validity of machine generated molecular representations. This has potential applications in drug discovery.

## 2. Literature survey on "Image quality analysis"

### Intern

May 2016 - June 2018 (2 years 2 months)

Electronic City - Bangalore

Worked on multiple projects.

1. The first one was based on pattern recognition. This project involved identifying various patterns of 3, 4 or 5 LEDs. It was executed as a simple image processing problem.

2. Worked on an interpreter for a standard query language for convex databases. It handles simple relational database queries like "SUBSET", "INTERSECTION", etc. The database contains convex objects which are represented by a set of linear constraints.

### IBM India Research Labs

#### Summer Intern

May 2018 - August 2018 (4 months)

Bengaluru Area, India

Worked on the problem of automatic summarization of code using Deep Learning. Modelled the problem as that of predicting function names from small snippets of function codes. Employed neural machine translation models for the same.

### Indian Institute of Space Science and Technology

#### Summer Research Intern

May 2017 - July 2017 (3 months)

Thiruvananthapuram Area, India

Worked in the Earth and Space Science Department on a direct application of pattern analysis techniques for a highly relevant problem statement in astrophysics. Used the K-Nearest Neighbor algorithm for detection of star clusters. Following this, did exhaustive comparative analysis between this method and previously used methods for cluster detection. Also tried estimating the background level on real sky data sets.

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## Education

### McGill University

PhD , Computer Science · (2019 - 2024)

International Institute of Information Technology Bangalore  
Master of Technology - MTech, IT · (2014 - 2019)

International Institute of Information Technology – Bangalore  
Bachelor of Technology - BTech, Information Technology · (2014 - 2019)

St Thomas Residential School Trivandrum  
ISC - 12th, Mathematics and Computer Science · (2005 - 2014)