

# MICHELLE THALAKOTTUR

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Pune, Maharashtra, India

## EDUCATION

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**Northeastern University, Boston, MA.**

2021 - Present

*Doctor of Philosophy in Computer Science*

Advisors: Frank Tip, Amal Ahmed

**MKSSS's Cummins College of Engineering for Women, University of Pune**

2017 - 2021

*B.Tech. in Computer Engineering*

CGPA: 8.9/10.0

## RESEARCH EXPERIENCE

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**Indian Institute of Technology, Bombay**

May 2020 - Present

*B.Tech. Research Project*

Advisor: Professor Uday Khedker, Dept. of Computer Science

Topic: Formalization of Translation Performed by the SCLP Compiler Phases

**Indian Institute of Technology, Bombay**

June 2020 - Sept. 2020

*Research Intern*

Advisor: Professor Uday Khedker, Dept. of Computer Science

Topic: Data Flow Analysis

- Worked on a research project where I provided an insight that allowed the algorithm to be generalized beyond its earlier application.
- Designed and implemented a data structure from the ground up to help represent a sparse family of sets that are discovered incrementally in Data Flow Analysis so that we can efficiently compare and perform operations on these sets.

**Indian Institute of Technology, Patna**

Nov. 2018 - June 2019

*Research Intern*

Advisor: Professor Jimson Mathew, Dept. of Computer Science

Topic: Dimensionality Reduction, Machine Learning

- Implemented, tested and presented a report of my results on a new algorithm that aimed to perform Dimensionality reduction in a Semi-supervised setting. I also compared the results to existing state-of-the-art algorithms and helped write a paper on the algorithm.
- This paper was later accepted after peer review for publication in the International Conference on Neural Information Processing (ICONIP 2019), Sydney, Australia.

## PEER-REVIEWED PUBLICATIONS

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**Semi-supervised Regularized Coplanar Discriminant Analysis**

ICONIP 2019

Rakesh Kumar Sanodiya, Michelle Davies Thalakottur, Jimson Mathew, Matloob Khushi

In *Proceedings of the International Conference on Neural Information Processing (ICONIP)*.

Sydney, Australia, December 2019

**Multi-objective Approach for Semi-Supervised Discriminant Analysis with Relative Distance**

CEC 2019

Rakesh Kumar Sanodiya, Sriparna Saha, Jimson Mathew, Michelle Davies Thalakottur, Utkarshinee Aadya

In *Proceedings of the 2019 IEEE Congress on Evolutionary Computation (CEC)*.

Wellington, New Zealand, June 2019

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## OUTREACH AND MENTORSHIP

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### Talks

- *Pursuing Undergraduate Research* [video] [slides]

This is an introductory talk given to students from disconnected undergrad programs who have never considered doing research, or who are starting to think about pursuing research.

### Student Club: Artificial Intelligence and Computer Vision Society (AICVS)

*Head Coordinator*

2019 - 2020

- Coordinated outreach efforts for undergraduate research in computer science.
- Organized a bimonthly platform for students to present their ongoing work and projects.

*Website Coordinator*

2018 - 2019

- Set up and maintained the club website in the first year of the club.
- Coordinated student volunteer efforts to publish monthly blogs centered around Machine Learning.

### Student Chapter: Society of Women Engineers (SWE)

*Head of Student Representatives*

2019 - 2020

- Our chapter received the SWE WE Local 2021 Outstanding Outreach Event Award and SWE We Local 2021 Joint Professional/Collegiate Event Award for our work.
- Organized an STEM outreach program with 25 student volunteers in partnership with a local education NGO, the IDEA foundation for K-8 underprivileged students.

*Student Representative*

2018 - 2019

- Helped organize a STEM Outreach program with 20 student volunteers to Maher Ashram, Pune for K-8 underprivileged students.

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## OTHER ACTIVITIES

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### Programming Languages Mentoring Workshop (PLMW)

Aug. 2020

International Conference on Functional Programming (ICFP2020)