

MICHELLE THALAKOTTUR

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Pune 411016, Maharashtra, India

EDUCATION

MKSSS's Cummins College of Engineering, University of Pune, Pune
B.Tech. in Computer Engineering
Overall GPA: 8.8 / 10.0 (absolute grade)

2017 - Present
Spring 2021, expected

RESEARCH EXPERIENCE

Indian Institute of Technology, Bombay

June 2020 - Present

Research Intern

Advisor: Professor Uday Khedker, Dept. of Computer Science

Topic: Data Flow Analysis

- 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.
- Built a Cpp library that allows you to use data structures like BDDs and vector-clocks to efficiently represent a sparse family of sets for Data Flow Analysis.
- Worked on a research project where I provided an insight that allowed the algorithm to be generalized beyond its earlier application.

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, Patna

Nov. 2018 - Apr. 2019 (remote)

Research Intern

May 2019 - June 2019 (lab work)

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.
- Of ten summer projects submitted to the conference, ours was one of two to be accepted.
- While working remotely, I contributed to the literature review of two papers which were later published.

PEER-REVIEWED PUBLICATIONS

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

OUTREACH AND MENTORSHIP

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

AICVS is a club that aims to equip students with a primary skill set in Machine Learning, the knowledge to implement various algorithms and gain a good understanding of what happens behind the scenes.

Head Coordinator

2019 - 2020

- Head organizer of various technical talks and competitions to introduce students to Machine Learning.
- 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)

The Society of Women Engineers, founded in 1950, is an international not-for-profit educational and service organization headquartered in the United States. The Society of Women Engineers is the worlds largest advocate and catalyst for change for women in engineering and technology.

Head of Student Representatives

2019 - 2020

- Organized an STEM outreach program with 25 student volunteers in partnership with a local education NGO, the IDEA foundation for K-8 underprivileged students.
- Helped organize the Incube Conference which had several invited talks on the theme of Innovation and Inclusion and showcased various student research projects.
- Helped organize a SWE Mentorship program and was a mentor in the same.

Student Representative

2018 - 2019

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

SERVICE

Student Council: Elected Student Panel Member

Assistant English Editor

2018 - 2019

The Student Panel is a group of elected students working together within the administrative framework of the college to provide a means for student expression and encourage student - faculty - community relations.

- Edited articles and worked to publish the Annual College Magazine, Kshitij.
- Helped organize the Annual College Technical Fest, Innovation 2019 and the Cultural Fest, Gandhaar 2019.

OTHER ACTIVITIES

Programming Languages Mentoring Workshop (PLMW)

Aug. 2020

International Conference on Functional Programming (ICFP)