Meera Krishnamoorthy

(408) 857-2695 meera@alumni.caltech.edu

Education

2019 - present	**University of Michigan** Ph.D. in Computer Science and Engineering Advisor: Jenna Wiens	GPA: 3.94
2015 - 2019	**California Institute of Technology** B.S. in Electrical Engineering, Minor in Computer Science	GPA: 3.70

Awards and Fellowships

2019	Graduate Fellowship for STEM Diversity
2018	Arthur E. Lamel Memorial Summer Undergraduate Research Fellowship
2018	SanPietro Travel Prize Recipient
2015	National Merit Scholar

Research and Work Experience

2019 - Present	**Graduate Student Research Assistant**, *University of Michigan* Advised by Professor Jenna Wiens. Developing novel machine learning methods to analyze microbiome data.
Summer 2018	**Summer Undergraduate Research Fellow**, *California Institute of Technology* Mentored by Professor Yisong Yue. Created and tested a novel technique combining domain knowledge and machine learning approaches to create safer and more accurate controllers.
Summer 2017	**Software Engineering Intern**, *Rocketship.vc* Created method to scrape and store information about startup investors and founders. Performed social network analysis to find trends among networks of successful venture personnel.
Summer 2016	**Summer Undergraduate Research Fellow**, *NASA Jet Propulsion Laboratory* Mentored by Dr. Glenn Orton.Performed mathematical modeling and spectral analysis to identify nature of astronomical impact on Jupiter.
2013 - 2015	**Research Intern**, *Stanford University* Mentored by Professor Shripad Tuljapurkar. Created mathematical models to simulate habitat degradation.

Publications

Meera Krishnamoorthy, Piyush Ranjan, John R. Erb-Downward, Robert P. Dickson, Jenna Wiens. "AMAISE: a machine learning approach to index-free sequence enrichment," Journal Paper, *Nature Communications Biology* **5**, Article Number 568, June 2022.

Andrew J. Taylor, Victor D. Dorobantu, **Meera Krishnamoorthy**, Hoang M. Le, Yisong Yue, Aaron D. Ames. "A Control Lyapunov Perspective on Episodic Learning via Projection to State Stability," Conference Paper, *IEEE Conference on Decision and Control (CDC)*, Dec. 2019, Nice, France.

Presentations

Meera Krishnamoorthy, Piyush Ranjan, John Erb-Downward, Robert Dickson, Jenna Wiens, "Machine Learning for Host Depletion of Metagenomic Data in Clinical Diagnostics," Poster Presentation, *Machine Learning in Computational Biology (MLCB) 2021*, Nov. 2021, Virtual Conference.

Meera Krishnamoorthy, Piyush Ranjan, John Erb-Downward, Robert Dickson, Jenna Wiens, "Machine Learning for In Silico Host-Depletion of Metagenomics Samples," Poster Presentation, *9th Annual Kahn Symposium*, Dec. 2020, Virtual Conference.

Teaching

2020-2021	**Instructor**, *Artificial Intelligence for All (AI4All)* Developed and helped students with Natural Language Processing projects involving translation and pun generation (Summer 2020) Taught coursework on data visualization, feature processing, and k-means clustering (Summer 2021)
2018 - 2019	**Undergraduate Teaching Assistant**, *California Institute of Technology* CS/CNS/EE 156a: Learning Systems (Fall 2018) CS/CNS/EE 155: Machine Learning and Data Mining (Winter 2019) CS/CNS/EE 156b: Learning Systems Project Course (Spring 2019)

Professional and Academic Service

2021-2022	**Social Chair**, *Ensemble of Computer Science Ladies (ECSEL+)* Planned social activities for members of ECSEL+
Fall 2020	**Poster/Demo Session Co-chair**, *Michigan AI Symposium* Helped advertise and organize the Michigan AI Symposium, a day of research talks, demos, and posters that brings together AI enthusiasts from industry and academia.
2015 - 2019	**Co-editor in Chief**, *Caltech Undergraduate Research Journal* Oversee editing and publication process of journal.

Volunteer Work

2015 - 2019	**Member**, *Caltech Robogals* Teach robotics workshops to 1st - 8th grade students.
2015 - 2019	**Member**, *Caltech Society of Women Engineers* Mentor younger members about classes and internships. Volunteer in community outreach events.
2015 - 2019	**Tutor**, RISE Program Tutor 8th - 12th grade students in various math and science courses.