

# Meera Krishnamoorthy

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## Education

2019 - present	<b>University of Michigan</b> Ph.D. in Computer Science and Engineering Advisor: Jenna Wiens	GPA: 3.94
2015 - 2019	<b>California Institute of Technology</b> 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	<b>Graduate Student Research Assistant</b> , <i>University of Michigan</i> Advised by Professor Jenna Wiens. Developing novel machine learning methods to analyze microbiome data.
Summer 2018	<b>Summer Undergraduate Research Fellow</b> , <i>California Institute of Technology</i> 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	<b>Software Engineering Intern</b> , <i>Rocketship.vc</i> 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	<b>Summer Undergraduate Research Fellow</b> , <i>NASA Jet Propulsion Laboratory</i> Mentored by Dr. Glenn Orton. Performed mathematical modeling and spectral analysis to identify nature of astronomical impact on Jupiter.
2013 - 2015	<b>Research Intern</b> , <i>Stanford University</i> Mentored by Professor Shripad Tuljapurkar. Created mathematical models to simulate habitat degradation.

## Publications

**Meera Krishnamoorthy**, Piyush Ranjan, John Erb-Downward, Robert Dickson, Jenna Wiens. “AMAISE: a machine learning approach to index-free sequence enrichment,” Journal Paper, *Nature Communications Biology* **5**, 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.