

# Divya Shanmugam

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## Education

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Massachusetts Institute of Technology	Expected 05/2023
Ph.D, Electrical Engineering and Computer Science	
Massachusetts Institute of Technology	05/2018
Master of Engineering, Electrical Engineering and Computer Science	
Thesis title: <i>Representation Learning for Improved Distance and Risk Metrics</i>	
Massachusetts Institute of Technology	05/2017
B.S., Electrical Engineering and Computer Science	

## Employment

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Research Assistant, Clinical and Applied Machine Learning Group	07/2017 - 09/2019
Research Intern, Borealis AI	06/2018 - 09/2018
Research Intern, D.E. Shaw Research	06/2016 - 09/2016
Research Assistant, Computation and Biology Group	06/2016 - 09/2016
Software Engineering Intern, Counsyl	06/2015 - 09/2015
Software Engineering Intern, Aetion,	01/2015 - 02/2015
Research Assistant, Northwestern University Bioinformatics Center	06/2012 - 09/2012
Research Assistant, Northwestern University Bioinformatics Center	06/2011 - 09/2011

## Publications

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\* denotes equal contribution.

1. **D. Shanmugam**, D. Blalock, J. Gutttag, "Multiple Instance Learning for ECG Risk Stratification". *MLHC-19* (oral presentation)
2. **D. Shanmugam**, D. Blalock, R. Sahoo, J. Gutttag, "Towards Principled Test-Time Augmentation". *Under review*
3. J. Sahota\*, **D. Shanmugam\***, J. Ramanan, S. Eghbali, M. Brubaker, "Addressing Feature-Dependent Label Noise: A Generative Framework" *preprint*
4. **D. Shanmugam**, D. Blalock, J. Gutttag, "Jiffy: A Convolutional Approach to Multivariate Time Series Classification". *preprint*

## Workshops and poster sessions

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1. *Image Segmentation of Liver Stage Malaria Infection with Spatial Uncertainty Sampling*  
Workshop on Computational Biology, ICML 2019
2. *Multiple Instance Learning for Cardiac Risk Stratification.*  
Women in Machine Learning Workshop, NeurIPS 2018 (oral presentation)
3. *Multiple Instance Learning for ECG Risk Stratification.*  
Machine Learning for Health Workshop, NeurIPS 2018
4. *ECG Risk Stratification Using Multiple Instance Learning.*  
MIT DSAIL 2018
5. *Jiffy: A Convolution Approach to Learning Time Series Similarity.*  
MIT MasterWorks 2018
6. *A Convolution Approach to Learning Time Series Similarity.*  
Women in Machine Learning Workshop, NeurIPS 2017
7. *Identifying and Accounting for Disparities in Language Due to Economic Class.*  
Women in Machine Learning Workshop, NeurIPS 2017
8. *Compressive Metagenomics*  
MIT Microbiome Center Symposium 2016

## Invited talks

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1. *Multiple Instance Learning for ECG Risk Stratification.* University of Michigan in Ann Arbor, Michigan, August 2019

## Professional Service

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### TEACHING

<b>Teaching assistant:</b> Introduction to Machine Learning, MIT	SPR 2018
<b>Teaching assistant:</b> Introduction to Machine Learning, MIT	FAL 2017

### MENTORSHIP

Roshni Sahoo, SuperUROP	2018-2019
Skylar Gordon, AI Mentee	2018-2019
Xinyi Guo, AI Mentee	2018-2019

### REVIEWING

Machine Learning for Health NeurIPS workshop	2019
Women in Machine Learning NeurIPS workshop	2018

## PANELS

Graduate Student Panel (MIT Women in EECS)	2019
Lightning Talks (MIT Women in EECS)	2017

## SERVICE

GW6 Event Coordinator	2018-2019
MIT AI Mentorship Program Coordinator	2018-2019

## Awards

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NSF Graduate Research Fellowship 2017

## Language Skills

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<u>Computing:</u>	Python, Go, C
<u>Spoken:</u>	English, Spanish