

# Anshula Gandhi

Mathematics and Computer Science Researcher

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🌐 anshula.com

## EDUCATION

### Massachusetts Institute of Technology

B.Sc. in Math and History  
2015–2019  
4.8/5 GPA

### Thomas Jefferson High School for Science and Technology

Advanced Studies Diploma  
2011–2015  
4.5/4 GPA

## COURSEWORK

### Computer Science

Artificial Intelligence  
Parallel Computing  
Data Structures  
Design & Analysis of Algorithms  
Topics in Theoretical Comp. Sci.  
Theory of Computation  
Computation Structures  
Interconn. Embedded Systems

### Mathematics

Discrete Math  
Combinatorics  
Real Analysis  
Abstract Algebra  
Linear Algebra  
Multivariable Calculus  
Differential Equations

## SKILLS

Pytorch, Python, C, C++, Java,  
Bash, Git, Mathematica, Coq

## EXTRACURRICULARS

News Editor of The Tech  
Mock Trial Attorney

## RESEARCH

### MIT Center for Brains, Minds, and Machines

Spring '20 –

Senior Research Assistant

- Developing neurally-guided program synthesis techniques to solve a variety of symbolic reasoning problems through applying the neuroscience behind how humans logically reason.

### Universidad Nacional Autónoma de México

Fall '19

Visiting Researcher

- Developed Python reinforcement learning algorithms to prove theorems in lattice theory, and developed a Coq tactic to apply duality to prove theorems in a single step.

### MIT Center for Brains, Minds, and Machines

Spring '19

Undergraduate Researcher

- Designed reinforcement learning environment with Coq and Python to prove mathematical theorems in group theory.

### MIT Distributed Robotics Lab

Spring '16, Fall '17–Fall '18

Undergraduate Researcher

- Constructed cost function to estimate risk of an autonomous vehicle's path based on surrounding density and velocity data.

### MITRE Nanosystems Group

Summer '16

Research Assistant

- Built circuits and algorithms for non-invasive medical device to reduce size, weight, and required power.

## PUBLICATIONS

### Dynamic Risk Density for Autonomous Navigation in Cluttered Environments without Object Detection

ICRA 2019.

Authors: Alyssa Pierson, Cristian Ioan Vasile, Anshula Gandhi, Wilko Schwarting, Sertac Karaman, and Daniela Rus.

## AWARDS

### Burchard Scholar

Spring '17 – Fall '17

Chosen as one of 35 MIT undergrads for excellence in the humanities.

### Community Catalyst Leader

Spring '17 – Fall '18

Selected for competitive one-on-one leadership coaching program.