Anshula Gandhi

Mathematics and Computer Science Researcher

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EDUCATION

Massachusetts Institute of Technology
B.Sc. in Math and History
2015–2019
4.8 GPA

Thomas Jefferson High School for Science and Technology
Advanced Studies Diploma
2011–2015
4.5 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
Real Analysis
Abstract Algebra
Linear Algebra
Multivariable Calculus
Differential Equations

SKILLS

Python, C, C++, Java, SQL, Bash, Git, Mathematica, HTML, CSS, Javascript

EXTRACURRICULARS

News Editor of The Tech
Mock Trial Attorney

RESEARCH

MIT Center for Brains, Minds, and Machines Spring 2019
Undergraduate Researcher

- Designed reinforcement learning environment with Coq and Python to prove mathematical theorems in linear algebra.

MIT Distributed Robotics Lab Spring 2016, Fall 2017–Fall 2018
Undergraduate Researcher

- Constructed cost function to estimate risk of an autonomous vehicle's path based on surrounding density and velocity data.
- Developed robot path-planning algorithms (e.g. potential fields, visibility graphs) to find safe speed for autonomous vehicles.

MITRE Nanosystems Group Summer 2016
Research Assistant

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

MIT Exoplanet Theory Lab Summer 2015
Undergraduate Researcher

- Algorithmically classified thousands of life-identifying chemical spectra to pave way for detecting life on other planets.

NASA Goddard Space Flight Center Summer 2014 – Spring 2015
Research Assistant

- Developed microlensing-based exoplanet detection algorithms in C++ to be deployed on NASA's WFIRST telescope.

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 2017 – Fall 2017
Chosen as one of 35 MIT undergrads for excellence in the humanities.

Community Catalyst Leader Spring 2017 – Fall 2018
Selected for competitive one-on-one leadership coaching program.