Anika Nath

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Education

Massachusetts Institute of Technology (May 2025)

Candidate for Bachelors in Earth, Atmospheric, and Planetary Science *and* Bachelors in Physics, **GPA:** 4.8/5.0

    2023-2024: Observational Techniques of Optical Astronomy, Physics III: Waves and Vibrations, Introduction To Special Relativity

    2022-2023: Introduction to Geophysics and Planetary Science, Our Space Odyssey, Introduction to Computational Science and Engineering, Introduction to Geology, Physical Principles of Remote Sensing, Classical Mechanics II, Differential Equations

    2021-2022: Introduction to Astronomy, Fundamentals of Programming, Physics II: Electricity & Magnetism, Introduction to Computer Science Programming in Python, Physics 1: Classical Mechanics, Calculus 1: Single Variable Calculus, Calculus II: Multivariable Calculus

Stoneham High School (June 2021)

GPA: *Weighted*: 4.94/4.0, *Unweighted*: 4.0/4.0 | **Class rank:** 3/197

Research Experience

***Undergraduate Researcher,* MIT Department of Earth, Atmospheric & Planetary Sciences** (Feb 2024 - May 2024)
- Will use Python to analyze data from simulations of the formation of gas giants from vortices

Undergraduate Researcher (Feb 2023 - July 2023)
- Using Python to make simulations and visualizations for students to understand the concept of magnetic fields.

***Undergraduate Researcher,* MIT Department of Earth, Atmospheric & Planetary Sciences** (Jan 2022 - August 2022)
- Used Python to analyze data from simulations of the ocean currents of generic icy moons to figure out the influence of factors such as the rotation of the moon and ocean depth on these currents
- My name is going to be listed as a second author of the research paper written by Suyash Bire, a PhD student I worked with.

***Independent Researcher,* Boston University** (June 2020 - February 2021)
- Examined and analyzed how organic matter (CDOM - Chromophoric dissolved organic matter) in water bodies is affected by exposure to sunlight via the photo bleaching process. Used Python and machine learning.

Work Experience

Research Student in the Space Remote Sensing and Data Science Group, Los Alamos National Laboratory (May 2023 - Sep 2023)
- Analyzed data from the laser-induced breakdown spectroscopy (LIBS) instrument and the Mars Supercam Microphone on the Perseverance Rover in order to verify that acoustic data from the microphone can be used to detect the transition from the coating to the rock.

***Teaching Assistant,* Classical Mechanics I** (Sept 2022 - Dec 2022)
- Assisted students with problem sets on topics such as energy, momentum, and rotational mechanics

***Website Intern,* Empowerment Through Integration** (May 2018 - Dec 2020)
- Enhance, administer and maintain the ETI Website and keep it up-to-date. (Squarespace)

Community Service

Covid-19 Community Outreach (April 2020 - May 2021)
- Created the Covid-19 Stoneham Mutual Aid Hub chapter to provide information during Covid-19 and help people in need connect with the volunteers. Raised more than $1000.

Honors

First Prize at Massachusetts Science and Engineering Fair (MSEF), Second Prize at Massachusetts Junior Academy of Science (MJAS), American Junior Academy of Science Symposium 2021 participant, Foundation Medicine Award, Naval Science Academy Award, U.S. Air Force Award (May 2020)

- Project title: ML-based Speech Recognition App for individuals with speech disorders.
- Created an Android app using Python that would recognize ten basic words spoken by individuals with speech disorders. Used the Tensorflow library for training the model and then predicted the accuracy of the trained model.

Special Skills: Python, JavaScript, Java, C, Tensorflow; Website design tools - Squarespace, WordPress, Google Sites; Blender

Hobbies: McCormick House Government, Blender; Board Games; My Blog www.anikanath.com/blog; Brilliant App;