Jon Rosario

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Education

Massachusetts Institute of Technology | Class Of 2024

- **Course 18C: Mathematics with Computer Science**
- SAT: 1530/1600, SAT Math II: 800/800, Current GPA: 4.4
- Relevant Coursework: Linear Algebra & Optimization, Calculus, Differential Equations, Machine Learning, Applied Discrete Math, Physics, System Functions/Laplace Transform, Fundamentals of Programming
- Current Courses: Introduction to Algorithms, Real Analysis B, Quantum Physics I, Introduction to Education

Skills & Interests

Computer Software and Programming

- Python programming from classes and side projects. These include solving PDE computational models using self-taught finite element method and designing ODE models for analysis, a Discord Bot using the Discord API that can scan and detect similarity in images using hash functions, writing algorithms to reverse engineer video games, and some number theory algorithms.
- Moderate knowledge of design languages such as HTML/CSS/JS. Have fully designed many websites since 2016, including my most recent personal website: **triviajon.com**.
- Continued usage and high proficiency in common Windows programs such as the Adobe Creative Suite (Photoshop, Lightroom, Premiere Pro, Brackets) and Microsoft Office Suite (Word, PowerPoint, Excel).

Music

- Knowledge in basic music theory topics such as harmony and counterpoint. Many small projects include composition and experimentation with music.
- Baritone singer and Assistant Music Director for Asymptones, an MIT Acapella group. Casual clarinetist at home. Fan of DCI and musicals.

Leadership & Experience

Undergraduate Research with Glaciers Group | MIT | Summer 2021

- Researched methods for analyzing glaciers in Antarctica and created software to efficiently pre-process substantial amounts of radar data for use in machine learning using the collected information.
- Included use of Google Cloud, Python and JavaScript, and the Google Earth Engine API. Work in computer vision and pattern recognition.
- Presented research to a collection of graduate students, undergraduate students, and faculty members in the Geophysics Summer Research Symposium

Rocket Team Structures™ | MIT | 2020 – 2022 | IT Chair Executive

- Solo project on finite element method analysis of three custom designed aluminum wrenches. Extracted information and presented my findings as a study of the properties of Aluminum 6061-T6.
- Personal duties as IT chair included managing the Apache Subversion server that hosts all of the files needed internally across Rocket Team and supervising the Rocket Team public Wiki page, where information was stored for use by future generations of members.