

Altaf Syed

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EDUCATION

University of Virginia | 3.903/4.000 GPA

Charlottesville, Virginia

B.S. in Computer Science

Expected Graduation, May 2026

- **Related Coursework:** Data Structures & Algorithms I, Computer Systems & Organizations I, Linear Algebra, Discrete Math
- **Currently Taking:** Data Structures & Algorithms II, Software Development Essentials, Probability

B.A. in Economics

Expected Graduation, May 2026

- **Related Coursework:** Intermediate Microeconomics
- **Currently Taking:** Intermediate Macroeconomics, Probability, Economics of Public Sector

EXPERIENCE

Peraton

Herndon, Virginia

Software Development Engineering Intern

Jun 2024 – Aug 2024

- Developed Python application to integrate existing scripts with new functionality to create drone waypoints and instruct the drone to imitate the behavior of a LEO satellite
- Designed and implemented an accessible visual interface so the drone path could be created and commanded by individuals with minimal knowledge of the system
- Worked with a team and developed a process to mathematically determine possible orbital parameters given a singular pointing vector of an antenna
- Automated the generation of various plausible satellite orbits using Systems Tool Kit (STK) API
- Built a Microsoft Excel Macro automation to generate and print server rack labels

University of Virginia, Applied Mathematics Department

Charlottesville, Virginia

Undergraduate Teaching Assistant

Aug 2024 – Current

- Assisted in the instruction of undergraduate mathematics courses by supporting lectures, leading discussion sections, grading assignments, and providing academic guidance to students.

University of Virginia, Patel Labs

Charlottesville, Virginia

Undergraduate Student Researcher

Aug 2024 - Current

- Developed a machine learning model in Python using TensorFlow and Keras to analyze 24-hour video footage for tracking mice and detecting seizures, enhancing the accuracy of automated seizure detection
- Developed a Python script using MNE to algorithmically detect seizures by processing and analyzing EEG files, improving the accuracy and efficiency of seizure identification

The Coder School

Leesburg, Virginia

Code Coach | Tutor

Oct 2020 – June 2023

- Taught young students ranging from 3rd grade to 8th the basics of various coding languages, including Scratch, JavaScript, and Python

PROJECTS

Python Stock Market Technical Analysis

Ashburn, Virginia

Independent Researcher

Jul 2024 - Current

- Used various Python libraries and stock market API's including twelvedata to pull data from different stocks and matplotlib to visualize incoming data
- Constructed algorithms to detect common market trends including double top, double bottom, inverse head and shoulders, and head and shoulders using extrema locations in stock prices

Total Knee Replacement Surgery Exoskeleton

Leesburg, Virginia

Independent Researcher

Aug 2021 – Jun 2023

- Researching and developing a novel exoskeleton for reduction of force applied on the knee following total knee replacement surgery utilizing the repulsive force of neodymium magnets in order to shorten recovery time
- Modeled data and 3D renderings using programs: C++ | Fusion360 | Vernier Graphical System | Multimaker Cura

SKILLS & ASSESTS

Programming: Java, Python, JavaScript, MATLAB, C++

Tools: IntelliJ, PyCharm, Visual Studio Code, Microsoft Office

Certifications: Scouts of BSA - Eagle Scout, Level 1 STK Certified