



Joshua Lee

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EDUCATION

University of Maryland - College Park

Bachelor of Science, Applied Mathematics and Computer Science - GPA: 3.9

Sep 2023 – May 2026

College Park, MD

Boston University

Bachelor of Arts, Mathematics and Computer Science - GPA: 3.96

Sep 2022 – May 2023

Boston, MA

EXPERIENCE

Web Developer

UMD, Department of Biology

Jan 2024 – Present

College Park, MD

- Developed additional features to the class website used by over 200 students per semester, implementing various features such as infinite practice problems, and specialized feedback for questions
- Utilized data analytics, predictive quizzes, and real-time feedback mechanisms to identify and address struggles that students may be facing during their learning
- Independently built and deployed an Express.js backend API to query a MySQL database to store and retrieve user data tracking users' progress and retention, while cleaning and processing real time data
- Created a dashboard for admins and professors, displaying real time student interaction data using React.js and Vite.js

Software Engineering Intern

BU Spark!

Jan 2023 – May 2023

Boston, MA

- Collaborated within a development team and with Boston's District 7 Councilor, Tania Fernandes Anderson, aiming to enhance constituents' access to local representatives
- Generated key features of an interactive app highlighting important District 7 data to aid residents while also identifying district needs
- Implemented and utilized technologies such as React.js, Firebase, Strapi, and PostgreSQL while also creating documentation for future teams

Programming Intern

Upside Games/ Chainable Corp.

Aug 2021 – May 2022

Remote

- Coded and tested scripts in Python and Node.js to automate key components in the backend
- Queried/added data with NoSQL through Firestore cloud database managing over 100,000 documents and 1000 users
- Fixed basic bugs/issues within the app through Azure DevOps and Jira
- Employed web scrapers using BeautifulSoup and Scrapy to gather important sports analytics and data

LEADERSHIP / EXTRACURRICULAR

SatDev

University of Maryland

Sep 2024 - Present

College Park, MD

- Implemented a contrast maximization algorithm to camera rotation and movement for star tracking in Python using event camera data and data visualization tools such as matplotlib
- Developed an ADCS simulation using Rust and Docker to simulate real data from key components in our satellite

SCUDEM Math Modeling Competition

University of Maryland

Mar 2024 - Apr 2024

University of Maryland

- Worked in a team of two other students, achieving the meritorious award
- Developed a differential equation modeling the dynamics between crime and punishment using coupled Lotka-Volterra systems
- Observed how populations changed for different sets of parameters modeling different degrees of crime and punishment

BU Hack4Impact

Backend JDT Lead

Dec 2022 - May 2023

Boston University

- Provided hands-on experience and classes following a comprehensive curriculum with technologies such as Github, Express Node.js, Firebase, and MongoDB
- Coordinated and created a comprehensive curriculum covering important basic backend concepts and technologies used in software development such as REST APIs

TECHNICAL SKILLS

Languages: Java, Python, SQL, JavaScript, Typescript, HTML/CSS, C, C++ , Rust, OCaml, x86/64 Assembly

Technologies/Frameworks: Git, Azure DevOps, Jira, React, Node.js, Material-UI, NumPy, Matplotlib, Pytorch, Sci-kit, Firebase, Plotly, Mathematica, MySQL, SQL, Excel, Webpack, Rust, Linux, Unix, Windows