

James Alexander

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Summary: Computer Science student with a focus on backend web development and systems programming. Experienced in building scalable web services, developer tools, and AI-assisted applications using Python, Go, TypeScript, and SQL.

EDUCATION

George Mason University | Fairfax, VA

May 2026

B.S. in Computer Science

Relevant Courses: Operating Systems, Analysis of Algorithms, Database Concepts, Computer Systems and Programming, Data Structures, Software Engineering, Object-Oriented Programming, Probability and Statistics for Engineers

TECHNICAL SKILLS

Languages: Python, TypeScript, Java, Go, Ruby, SQL, C, Rust

Tools, Systems, and Frameworks: Linux, Rails, Maven, React, JavaFX, Postgres, MySQL, MongoDB, Docker, Git

PROJECTS

CourseMatch | Ruby on Rails

Built a backend-focused web application using Ruby on Rails and Postgres that enables students at George Mason University to manage course histories, authenticate securely, and discover peer schedules. Designed RESTful routes and database models to support user-generated course data, schedule ratings, and profile views, emphasizing scalable data management and server-side logic.

AI Agent CLI | Python

Developed a Python-based AI agent CLI that recursively searches project directories to locate relevant files and analyze source code. Implemented logic to identify issues and apply automated code fixes, enabling faster debugging and refactoring through command-line interaction.

Open Source Contribution: OpenCode | TypeScript

Contributed to a large-scale open-source AI terminal agent written in TypeScript by adding unit tests for asynchronous utility functions. Improved reliability and maintainability of core backend logic while working within an established codebase with over 100,000 GitHub stars.

Black-Scholes Option Pricer | Go

Developed a Go-based terminal application that calculates call and put option prices using the Black-Scholes Model. Implemented backend computation logic for pricing and profit/loss analysis and integrated Bubble Tea to render an interactive TUI, including a dynamically generated profit/loss heatmap.

EXPERIENCE

Hackathons: Agents For Impact | Howard University, DC

Lethean | JavaScript, Python

Built backend services for an AI-powered healthcare web application that automates patient appointment scheduling and messaging. Implemented server-side logic to process uploaded files, extract structured data into JSON, and generate appointment records displayed on a dashboard with calendar integration and automated reminders.

PatriotHacks | Fairfax, VA

GlimpseAI | TypeScript, Next, React

Developed a web application using TypeScript and Next.js to support automated video generation workflows. Implemented request handling, user input processing, and data flow between frontend components and backend services, and built a landing page to showcase generated outputs and collect user interest.

ACADEMIC/PROFESSIONAL EXPERIENCE

George Mason | Fairfax, VA: Software Engineering Course

Marriage Status Application | Java, SQL

Collaborated on a Java-based desktop application that manages customer marriage status updates using role-based workflows. Designed backend logic and database interactions with MySQL to support data entry, review, and approval roles, using Maven, Git, Docker, and JavaFX for development and deployment.

Mathnasium | Haymarket, VA

Developed strong problem-solving and communication skills by instructing students of varying ages in complex math concepts through individualized and group sessions. Collaborated with parents to track progress and adapt learning strategies based on student needs.