

# Taha Sabir

(223) 272-8926 | [sabita01@gettysburg.edu](mailto:sabita01@gettysburg.edu) | [linkedin](#) | [github](#) | [portfolio](#)

## EDUCATION

### Gettysburg College

*Bachelor of Science in Computer Science and Mathematics*

Gettysburg, PA

*Expected May 2027*

- **Department GPA:** 3.93/4.00
- **Relevant Coursework:** Principles of Operating Systems, Data Structures & Algorithms, Advanced Data Science, Machine Learning & Artificial Intelligence, Abstract Mathematics, Linear Algebra, Multivariable Calculus
- **Spoken Languages:** English (Native), French (Native), Arabic (Native)

## EXPERIENCE

### Full Stack Software Engineering Intern

May 2024 – Jul 2024

*Brainlyne.ai*

*Washington, DC*

- Collaborated in a 5-person Agile team to design, implement, and ship four production features, contributing across backend APIs and frontend state management.
- Improved the class onboarding pipeline to increase sign-up completion by 28%.
- Developed an SAT prep progress tracker using GraphQL, raising module completion rates by 12%.
- Deployed backend services and microservices on AWS (EC2, S3) using Docker and GitHub Actions, reducing deployment time by 15% and improving CI/CD reliability.

### Embedded Software Engineering Intern

May 2025 – Jul 2025

*Digital Technology Summer Fellowship*

*Gettysburg, PA*

- Built a modular guitar stand robot that auto-tunes six strings in under 5 seconds.
- Developed a real-time FFT signal-processing pipeline in C++, enabling pitch detection with 0.5 Hz accuracy.
- Optimized system performance to achieve <50 ms motor response and <1 cent tuning error.
- Developed a PID control system integrating amplifiers, motor drivers, and piezo contact microphones.

### Computer Science Teaching Assistant

Feb 2024 – May 2024

*Gettysburg College Computer Science Department*

*Gettysburg, PA*

- Led counseling sessions for 80+ students, reducing professor help requests by 30%.
- Resolved 300+ coding questions in Java and Python, strengthening student understanding of OOP.

## PROJECTS

### Innovation & Creativity Lab AI Assistant | *Spring Boot, LangChain, Whisper*

Sep 2025 – Present

- Led the end-to-end development of a locally hosted AI voice assistant used by 50+ students weekly.
- Built a Next.js interface and a Spring Boot backend using LangChain, Whisper, and the Chroma Java clients.
- Integrated a 100+ item lab knowledge base and exposed REST endpoints for real-time vector lookups.

### SwiftApply | *React, Spring Boot, MySQL, JWT*

Feb 2025 – Apr 2025

- Built a Hackathon-winning AI-driven agentic job application platform, cutting application time by 90%.
- Integrated Gemini web-browsing Agent to enable autonomous web navigation across 100+ job portals.
- Built an application analysis tool to evaluate submissions and generate actionable improvement feedback.

### AI Line Tracking Robot | *Python, OpenCV, Raspberry Pi, PiCar-X SDK*

Jan 2025 – May 2025

- Implemented motor calibration and optical flow algorithms on the SunFounder PiCar-X using Python and OpenCV, achieving 95% servo alignment accuracy and smooth motion tracking.
- Integrated PiCar-X SDK, grayscale sensors, and Vilib camera APIs to test and debug navigation routines.

## TECHNICAL SKILLS

**Languages:** Java, Python, C++, JavaScript/TypeScript, SQL

**Frameworks:** Spring Boot, React, Next.js, Fast API, Node.js, Tailwind

**Developer Tools:** Git, Docker, GitHub Actions, AWS (EC2, S3), GraphQL, REST, JWT/Auth, Linux

**Libraries:** Pandas, NumPy, react-router, LangChain, OpenCV, Whisper, Chroma, Matplotlib