Taha Sabir

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EDUCATION

Gettysburg College   **Gettysburg, Pa**

B.S. in Computer Science, B.S in Mathematics   *Expected Graduation, May 2027*

- o **Department GPA:** 3.83/4.00
- o **Related Coursework:** Data Structures and Algorithms, Data Science Programming, Introduction to Artificial Intelligence, Principles of Operating Systems, Abstract Mathematics, Linear Algebra, Multivariable Calculus

SKILLS

Programming: Java, Python, C++, C, JavaScript, HTML/CSS, SQL, MATLAB, Node.js, React.js, Spring Boot, FastAPI, Tailwind
Tools: MySQL, Agile, PostgreSQL, Firebase, Git, GitHub, Eclipse, Arduino IDE, Linux, Fusion360, AWS

EXPERIENCE

Embedded Software Engineering Intern   **Gettysburg, Pa**

Digital Technology Summer Fellowship   *May 2025 – Jul 2025*

- Designed an **electromechanical guitar stand** that auto-tunes six strings, reducing tuning time by **90%**
- Authored and **published** paper on the project, adopted as a **template** for engineering projects involving **200+ students**
- Built real-time signal processing pipeline **C/C++** with **FFT** enabling **polyphonic** pitch detection at **±0.5 Hz accuracy**
- Developed **PID control system** with custom analog amplifier, motor drivers and piezo contact microphones achieving <50 ms motor response time and tuning precision within the **JND threshold** (<1 cent error).

Full Stack Software Engineering Intern   **Washington, DC**

Brainlyne.ai   *May 2024 – Jul 2024*

- Redesigned and streamlined the **user signup and onboarding flow**, improving conversion rates by **28%**
- Developed **10+ full-stack features** in collaboration with a **5-person engineering** team using React.js, Spring Boot, and PostgreSQL, enhancing core functionality and **improving usability by 20%** and increased **client adoption by 35%**.
- **Deployed microservices on AWS** with Docker and GitHub Actions, cutting deployment time by 40%.
- Optimized database queries and APIs, **reducing average response times by 35%**, enabling the system to handle 2× more concurrent users, and improving application reliability during peak traffic loads.

Computer Science Teaching Assistant   **Gettysburg, Pa**

Gettysburg College Computer Science Department   *Feb 2024 – May 2024*

- Led counseling sessions for **80+ students** resulting in students requesting **30% less assistance** from the professor.
- Resolved **300+ individual coding questions** in **Java** and **Python**, improving student problem-solving efficiency

PROJECTS

SwiftApply   **Newark, De**

Team lead   *March 2025 – Apr 2025*

- Built an **AI-powered web app** that automated job applications, integrating React.js, Spring Boot/FastAPI, and MySQL, **reducing application time by 70%**.
- Led frontend with **Shadcn UI/Tailwind** and coordinated a 4-person team to deliver an MVP in 4 weeks.
- Integrated **Gemini 2.5 APIs** to enable autonomous web navigation and automated browsing across **100+ job portals**

AI line tracking robot   **Gettysburg, Pa**

Team Member   *Feb 2025 – May 2025*

- Implemented motor calibration and **optical flow algorithms** on the SunFounder PiCar-X with **Python**, **OpenCV**, and Raspberry Pi, 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, improving line-following reliability by **40%** and documenting processes for team scalability.

ACTIVITIES AND LEADERSHIP

Residential Education Staff - *House Leader of International House*   **Gettysburg, Pa**

- Supervised more than **30 residents** from **20+ countries**   *Aug 2025 – Present*

Association of computing machinery - *Outreach chair*   **Gettysburg, Pa**

- Organized **5+** ACM student events with more than **50 participants**   *May 2025 – Present*
- Increased event participation by **30%** from previous years

Gettysburg College Rugby Team - *Fundraising Chair/ Social Share*   **Gettysburg, Pa**

- Raised more than $**5000** in the 2024 calendar year   *Feb 2023 – Present*
- Hosted **8 Events** for the 2024-2025 season with **350 participants**