

Frankie

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EDUCATION

Dulaney High School

August 2022 — May 2026

High School Degree

- Relevant Coursework: AP Computer Science Principles, AP Computer Science A (Java), C++, Physics

KEY PROJECTS

Muzzle (github.com/pikostudios/muzzle/tree/dev)

February 2021 — Present

- Open-source rendering/game framework written in C and OpenGL 4.6
- Work-in-progress development of `mz_gpu`, a graphics API abstraction layer, with the end goal of Vulkan support
- Bindings available for Java via JNI
- In use by classmates in AP Computer Science A and C++ for class projects

Abyss (frankiea.dev/projects/abyss)

August 2025 — October 2025

- 3D survival game built for the C++ capstone project earning a 103% final grade
- Custom 3D engine handling model loading, culling, entities, sky lights, and collision built in Java on top of Muzzle
- Redesigning Muzzle's Shader Pipeline API into a flexible Graphics Pipeline API to power the engine
- Won "Legendary Project" status and the student-voted "Game of the Year" award

Green Ridge Forest (frankiea.dev/projects/grf)

March 2025 — June 2025

- 3D horror game built for the AP Computer Science A capstone project earning a 105% final grade
- Custom hybrid GPU-driven raycaster and 3D engine built in Java on top of Muzzle
- Significantly upgraded Muzzle's shader support during this project

EXPERIENCE

AP Computer Science A Internship

August 2025 — Present

Dulaney High School

- Assisting students with classwork and understanding concepts in a college-level curriculum
- Preparing and teaching lessons that meet and exceed AP curriculum requirements
- Assessed and scored student work with feedback
- Working with 20+ students ranging from sophomores to seniors
- Interned for 135 hours

IT Internship

August 2024 — June 2024

Dulaney High School

- Assisted students and staff members with technology problems
- Carried out new student device migration for ~2,000 students alongside other interns
- Diagnosed complex problems such as connectivity, hardware, enterprise enrollment, and account management
- Worked with the IT department in the school district to manage on-premise inventory using IncidentIQ
- Interned for 125 hours

EXTRACURRICULAR ACTIVITIES

Mock Trial

August 2024 — May 2026

President

August 2025 — May 2026

- Argued mock cases in real courts in front of judges representing Dulaney High School in a statewide competition
- Successfully advocated for the reinstatement of the Mock Trial program after it was closed due to school budget issues

SKILLS

- **Programming Languages:** C, Java, Python, Powershell, GLSL
- **Technologies:** GPU Programming, OpenGL, CMake, JNI
- **Key Skills:** Problem Solving, Adaptability, Quick Learning, Concept Explanation, Collaboration