Logan Bowers

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Game developer with a flexible skillset and a passion for solving complex problems.

EDUCATION

Georgia Institute of Technology (Fall 2019 - Present) **Atlanta, GA**

- Pursuing B.S. in Computer Science (Fall 2022 Grad., 4.0 GPA)
- BSMS Program: Pursuing M.S. in Computer Science with Graphics Concentration (Fall 2023 Grad.)
- Potentially relevant coursework: Object Oriented Design & Programing, Data Structures and Algorithms, Computer Graphics, Algorithm Design, Systems and Networks, Computer Organization

PROJECTS

Graphics Engine (Summer 2019-2020, Custom C++) https://github.com/Bowers-L/GraphicsEngine

- Modeled light sources utilizing the ambient, diffuse, specular model by using GLSL shaders with C++
- Constructed a virtual camera by manipulating the Model-View-Projection matrix; Used index buffers to optimize
- Developed a path finder program using A* to visualize the optimal path between points in a nav-mesh

One Way Out (Spring 2020, Custom C (GBA)) https://github.com/Bowers-L/OneWayOut-GBA-Final Project-

- Employed extensive dynamic memory allocation with raw pointers in C to manage game object data
- Devised a technique for rendering backgrounds larger than normal by periodically loading in new textures off screen with Direct Memory Access (DMA)
- Used hardware interrupts to implement sound by DMA-ing sampled sound bits into special registers that are read by the speaker

Slider (Spring 2022-Current, Unity C#) https://github.com/Bowers-L/Slider

- Refactored and solved numerous bugs in 50+ script codebase using C# delegates/lambda expressions, extensive inheritance, and SOLID (mainly Open-Closed and Dependency Inversion principles)
- Engineered lightmap with collisions and shader lighting for 2D tilemap using URP shader graph with custom HLSL nodes.
- Designed optimal pathfinding algorithm to work with unique tile sliding mechanics using meta-graph structure with A* pathfinding.

Beam (Fall 2021, Project Lead, Unity C#) https://github.com/Bowers-L/Beam

- Lead a 6 member team with a pipelined level design approach involving ideation, sketches, greyboxing, and balance
- Designed and implemented core gameplay using raycasts, physics, and event systems (publisher-subscriber)
- Constructed visual effects using HLSL graphs in HDRP, and Photoshop

Leadership/Work Experience

Software Developer Intern, Stellar Science (Summer 2021)

- Maintained and debugged large-scale C++ codebase using Visual Studio and Git.
- Gained professional agile and pair programming experience working with experts in the fields of Computer Science, Math, and Physics
- Iterated on company mockups to implement image batch processor UI in QT, manage file system data, and integrate UI with functionality.

SKILLS

- **Programming** (proficient): C#, C++, C, Java (working): Python, GLSL, HLSL
- **Game Engines:** (proficient): Unity, Java Processing (working): Unreal Engine 4, Game Maker
- **Tools:** (proficient): Git Bash/Github, Trello/Codecks, OpenGL (working): Blender