Logan Bowers

loganmbowers@gmail.com | (404) 384-1028 (mobile) | Bowers-L.github.io

Engineer and 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

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 principles
- Engineered lightmap with collisions and shader lighting for 2D tilemap using URP shader graph with custom HLSL nodes.
- Designed optimal algorithms for static and dynamic graph structures using variations of A* and ref counter algorithms.

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

Scientific 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 and manage file data.

SKILLS

- **Programming:** (proficient) C#, C++, C, Java (working) Python, JavaScript/TypeScript, GLSL, HLSL
- **Game Engines:** (proficient) Unity, Java Processing (working) Unreal Engine 4, Game Maker
- **Tools/APIs:** (proficient) Git Bash/Github, Trello (working) OpenGL
- **Other:** (proficient) Aseprite, FL Studio (working) Blender, Photoshop