Logan Bowers

Game Developer motivated to create simple/communicable solutions to complex problems

EDUCATION

Georgia Institute of Technology | Atlanta, GA | BSMS Program

B.S., Computer Science | 4.0 GPA — Expected Dec 2022

M.S., Computer Science with Graphics Concentration — Expected Dec 2023

Relevant coursework: Object Oriented Design & Programming, Data Structures and Algorithms, Systems and Networks, Graphics, Machine Learning, Computer Vision, Animation

SKILLS

Game Engines | (proficient) Unity (working) Unreal, Game Maker, Godot

Programming | (proficient) C#, C++, C, Java (working) Rust, Python, JS/TS, GLSL, HLSL

Industry | (proficient) Agile, OOD/OOP (working) TDD/BDD, Functional Programming

Tools/APIs | (proficient) Git Bash/Github, Trello (working) Perforce, OpenGL, React (Native)

PROJECTS

Slider | **Team, Gameplay and Tools Engineer, Unity C#** | http://github.com/randomerz/Slider — Jan 2022-present

- Refactored/Debugged 23 kloc codebase using Clean Code, SOLID principles, Observer/Singleton Patterns.
- Engineered lightmap collisions and shaders for 2D tilemap using URP shader graph with custom HLSL nodes.
- Designed optimal algorithms for static and dynamic graph structures using A* and ref counter variations.
- Engineered AI with Behavior Tree, steering, constrained pathfinding, custom navigation agents.

Blood Favor | **Team, Tech Lead, Tools Engineer, Unity C#** | https://github.com/Abnormal202/BloodFavor — Fall 2022

- Implemented pseudo-procedural generation using abstract graph data with randomly chosen room prefabs.
- Created custom editor with UIBuilder and Scriptable Objects for designers to automate integration of level flows.
- Decoupled abstract graph flows from placement of rooms using Strategy pattern.
- Refactored generation system to use custom exceptions when generation fails and reduce possibility of failure.

Beam | **Team, Project Lead, Unity C#** | https://github.com/Bowers-L/Beam — Fall 2021

- Led 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.

Graphics Engine | **Individual, OpenGL C++** | https://github.com/Bowers-L/GraphicsEngine — Summer 2019-2020

- Modeled light sources utilizing ambient, diffuse, specular using GLSL shaders with C++.
- Constructed virtual camera using MVP Matrix; Used index buffers to optimize.
- Developed a path finder program using A* to visualize optimal path between points in a nav-mesh.

One Way Out | **Individual, GBA Custom C** | https://github.com/Bowers-L/OneWayOut-GBA-Final-Project- — Spr 2020

- Employed dynamic memory allocation with raw pointers in C to manage game object data.
- Devised rendering technique for large backgrounds by loading in new textures off screen with DMA.
- Used hardware interrupts to implement sound by DMA-ing sampled sound bits into special registers.

WORK EXPERIENCE

Scientific Software Developer Intern, C++ | **Stellar Science** — Summer 2021

- Maintained and debugged large-scale C++ codebase using Visual Studio and Git.
- Acquired professional agile and pair programming experience with experts in CS, Math, and Physics.
- Iterated on company mockups to implement image batch processor UI in QT and manage file data.

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