DAN SINGER
GAMEPLAY PROGRAMMER

SUMMARY

Committed, highly-motivated gameplay and AI programmer with a passion for creating scalable, designer-friendly systems and features.

EMPLOYMENT

Deviation Games
Los Angeles, CA
Software Engineer · May 2021 to Current
- Created and maintained a designer-driven AI Spawning system with C++ by integrating and extending a third-party plugin.
- Profiled game performance using Unreal Insights to find bottlenecks in gameplay code and develop solutions to make said code run faster.
- Worked with senior engineers to take ownership and add features to a core game system in a timely manner.
- Onboarded and mentored an associate engineer as part of handing off one of my systems.
- Fixed high-priority bugs to maintain playtest stability.

Los Angeles, CA
Associate Software Engineer · June 2020 to Apr. 2021
- Developed gameplay features using C++ and Blueprints in Unreal Engine.
- Developed and iterated on a core AI decision-making system.
- Developed and iterated on an AI character using the Environment Query System and the Gameplay Ability System, taking feedback from designers and animators into account.
- Wrote technical documentation in Confluence for gameplay and AI systems.

Oxide Games
Timonium, MD
Gameplay Engineering Intern · May 2019 to Aug. 2019
- Programmed new gameplay systems and contributed to existing ones with direction from game designers for an unannounced AAA title.
- Contributed to a large C++ codebase being worked on by 30+ developers.

American Greetings
Cleveland, OH
Interactive Developer Intern · Jan. 2018 to Aug. 2018
- Developed eCard games using HTML, CSS, JavaScript, TypeScript, and various JavaScript frameworks such as Pixi.js, Three.js, and GSAP.
- Programmed two Hidden Object Game eCards which are now in production.
- Took part in code reviews and used Jira for project management.
- Collaborated with other members of the Digital Product Development team and with the art and creative teams.

EDUCATION

Rochester Institute of Technology · Aug. 2016 to May 2020
BS Game Design & Development 2020
Cumulative GPA: 3.92
Minor: Music and Technology

SKILLS

PROGRAMMING: C/C++, C#, Python
GAME DEVELOPMENT: Unreal Engine 4, Unity, AI, Gameplay Ability System, Environment Query System, Behavior Trees
WEB DEVELOPMENT: HTML, CSS, JavaScript, Node.js, React
OTHER: Git, Perforce, Blender, Jira, Adobe Premiere, Confluence

PROJECTS

FT Engine (Academic Project)
- Developed a DirectX 11 Game Engine in a team of four.
- Programmed Mesh, Material, Camera, Particle, UI, and Lighting systems using C++ and HLSL.
- Implemented a robust Component-based architecture.

Dark (Personal Project)
- Created a procedurally-generated horror tech-demo with Unreal Engine 4 and C++.
- Implemented backtracking/depth-first-traversal algorithm to generate random 3D mazes.
- Incorporated horror aesthetic and an escape mechanic around the random mazes.

Automaestro (Personal Project)
- Developed music application with Unity and C# that allows anyone to play music on a virtual piano without worrying about playing the correct notes.
- Designed and implemented project architecture.
- Published to Windows Store and implemented in-app purchases.

Space FPS Tech Art Demo (Academic Project)
- Created a first-person-shooter metroidvania demo with Unreal Engine 4 to practice Tech Art concepts.
- Used techniques such as Level Streaming, LODs, HLODs, and Material Optimization.
- Implemented gameplay features with C++ and Blueprints.

CONTACT

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