

Aaron Duke

Software Engineer

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Education

BS in Computer Science, 2016 - 2021

Lawrence Technological University, Southfield, Michigan

- **CS First Google** - Supported the demonstration of a virtual reality experience for young audiences at a showcase event.
- **Leadership** - Head of Infinite Machine an Independent Game Development Studio.
- **Game Development Competitions** - Actively participated in the Global Game Jam and numerous regional game jams.
- **Coursework:** Game Design, Algorithm's and Data Structures, Artificial Intelligence, Computer Networking, Leadership, Software Engineering.

Skills

Unity 3D, C#, Python, JavaScript, PHP, LUA, HTML/CSS, Backend Web Development, GitHub, AWS, Virtual Reality, Game Design, Rapid Prototyping, Procedural Generation, Jira.

Employment history

Unity Game Producer, Apr 2017 - Mar 2022

Freelance, Remote

- Secured project milestones on schedule by accurately estimating development timelines, gathering precise project requirements, and delivering regular updates to clients.
- Achieved reliable server infrastructure by setting up AWS and EC2 instances, and implementing a custom domain site via NGINX to host a WebGL build.
- Utilized Mirror networking to develop client-server architecture for a multiplayer social space, incorporating in-game chat, interactions, and smooth transform synchronization.
- Implemented a computer vision facial tracking system using OpenCV to track player movements with real-time camera feed, resulting in a novel control scheme for in-game characters.
- Leveraged Knowledge in: Unity, C#, LUA, AWS, NGINX, WebGL, JavaScript, HTML/CSS, Networking

Gameplay Developer, Apr 2021 - May 2022

180 Games LLC, Remote

- Increased productivity and efficiency in the development pipeline by designing a Python script in 3DS Max to automate a repetitive task for a tycoon Roblox game.
- Achieved the acquisition of a key client during a competitive multi-company signing event by building a prototype for a branded Roblox experience that incorporated client-specific elements.
- Integrated third-party APIs for real-time analytics and player feedback collection, enabling data-driven decision-making and continuous improvement of game features and performance with Bloxbiz Analytics.
- Created interactive NPCs with complex dialogue systems and questlines, enriching gameplay and providing players with engaging and dynamic story-driven content.
- Leveraged Knowledge in: AWS, PHP, LUA, Python, Bloxbiz, Knit framework, nevermore packages, Roblox Studio

Gameplay Developer, Aug 2023 - Dec 2023

Newscape Studios, Remote

- Facilitated smoother gameplay by troubleshooting and resolving technical art challenges with collision geometry, reducing instances of clipping and other graphical issues.
- Delivered high-quality in-game Roblox cinematics by implementing the storyboard given by the artists, scripting keyframe events, and setting up camera triggers and pathing according to the design.
- Leveraged Knowledge in: Roblox Studio, LUA, Python, Knit framework, nevermore packages, GitHub

Web Developer, Jul 2023 - Present

Black Hills Information Security, Remote

- Implemented secure and scalable RESTful APIs with PHP, facilitating better interoperability between front-end and back-end systems.
- Created interactive web-based dashboards, improving data accessibility and team collaboration.
- Leveraged Knowledge in: JavaScript, PHP, Apache ECharts, Docker, Rest

Software Projects

Released Games

Led a long way down: <https://attemptingent.itch.io/led-a-long-way-down>

Ceremony: <https://attemptingent.itch.io/ceremony>

Procedural Generation

Prototyped rigid body simulations and inverse kinematics to create a rather grotesque monster which garnered strong reactions on social media.

Certifications

Agile Project Management, Coursera

<https://coursera.org/share/341bdb7b61c9e747a92622573dac6a26>