Michael Partridge

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Software Engineer / Game Developer

Highly motivated and adaptable developer with a strong foundation in object-oriented programming and hands-on experience across multiple languages. Proficient in game engine architecture, the computer graphics pipeline, and implementing game mechanics from concept to production. Skilled at problem-solving and optimizing performance in both solo and team environments. Passionate about game and software development, with a proven ability to quickly learn new technologies and deliver high-quality results.

EDUCATION

Computer Science, B.S. California State University, Sacramento • 08/2019 - 12/2024

PROJECTS - Find video demos on Portfolio Website

Tectonic Tactics

I am currently leading the development of *Tectonic Tactics*, a PC/Mobile game using Godot, where I am responsible for implementing core gameplay features, developing front-end UI, and architecting server infrastructure for multiplayer functionality. I work closely with a team of designers, artists, and marketers, and I contribute to the entire game development process—from gameplay mechanics to optimizing the development pipeline for artists and designers. I ensure smooth gameplay and performance by actively identifying and resolving bugs, while maintaining a high-quality experience for both single-player and multiplayer modes.

Tonne It Up Fitness App

As Tech Lead for the "*Tonne It Up*" fitness app, developed for iOS and Android using Flutter, I led a team of 7 others to create a platform connecting personal trainers with clients for tracking fitness progress, managing appointments, and creating personalized workout plans. I designed and implemented key features, integrated Firebase for cloud storage to manage user data, and ensured seamless deployment for mobile testing and release. My role also involved overseeing the development process, coordinating with team members, and ensuring the app met functionality and performance goals.

Growth

Growth is a 2D platformer created for the GMTK 2024 Game Jam, built around the theme "Built to Scale." I developed the game in Godot, allowing players to control the size of their character to navigate increasingly challenging platforming puzzles. The game was designed and implemented within a short time frame, showcasing my skills in rapid prototyping and gameplay design. A playable version is available online, and I encourage feedback to further refine the experience.

Portfolio Website

My portfolio website showcases my favorite projects in greater detail than a resume allows, featuring video demos and up-to-date information on my current work. The site is actively maintained to reflect my latest pursuits and includes a personal section about who I am outside of development. You can explore my projects and learn more about my work by visiting https://likablemike.github.io/.

Beyond (PC Game)

I created a 3D multiplayer space combat game as part of a Computer Game Architecture class, building on a custom Java-based game engine. I extended the engine to implement key features, including multiplayer networking, physics, rendering, and AI. I designed and optimized systems for real-time multiplayer communication and synchronization, while also developing core gameplay mechanics such as player movement, collision detection, and space combat dynamics. This hands-on project enhanced my skills in game engine development, networking, and performance optimization, providing a deep understanding of the underlying systems that power interactive 3D games.

Snake Clone

I developed a modernized version of the classic Snake game using Android Studio, with a focus on 2D graphics and gameplay enhancements. Leveraged object-oriented programming principles and design patterns to create a smooth, maintainable codebase. Introduced new features, including custom visuals, sound effects, and music, to refresh the classic experience. This project strengthened my skills in mobile development, game design, and UI/UX, while showcasing my ability to apply design patterns to real-world applications.

RELEVANT COURSES

Advanced Computer Graphics: Using OpenGL, this course delved into advanced rendering techniques such as ray tracing and physically based rendering among other things by offering us students a hands-on experience with the render pipeline. We wrote our own shaders in the GLSL language and rendered our own scenes from the ground up

Computer Game Architecture + Implementation: This course combined many concepts from the above classes while diving deeper into the architecture of game engines and the implementation of game mechanics. We covered concepts such as physics engines and render pipeline along with multiple device input handling and multiplayer network synchronization.

Advanced Algorithm Design: This course taught me about advanced techniques such as dynamic programming, greedy algorithms, and divide-and-conquer approaches while gaining an understanding of their time complexities and use cases. We also gained a deeper knowledge of NP-completeness and where it fits into the world of software development.

Operating System Principles: Here I gained a deeper understanding of the heart of a computer. We dove into concepts such as CPU scheduling and synchronization while implementing our own multithreaded programs and deadlock avoidance algorithms.

Computer Network Fundamentals: This class gave me a broad understanding of modern network protocols and architecture while also diving deeper into its implementation with UDP and TCP connection. We also explored the related network flow algorithms and network security.

WORK EXPERIENCE

Head of Development - Hunu Interactive (July 2024 - Present)

This is currently a part-time position where I am spearheading the development of a future PC/Mobile game title. Anything from front-end UI and gameplay mechanics to server architecture and multiplayer implementation, I am working to build this game from the ground up with a tight-knit team. This position is related to the “Tectonic Tactics” section above.

SKILLS: C#, C++, C, Java, Python, Flutter, NoSQL, Godot, Unity, GLSL, OpenGL, 3D Modeling, Android Studio, Git, GitHub, Linux, SQL, Agile, Jira, Firebase, Amazon EC2, Prototyping.