James **Graham**

GAME & TOOL DEVELOPER · AUDIO & GRAPHICS FREAK

Redlands, CA 92373 · Able to relocate within USA

📞 (+1) 909-618-2463 | ✉ inquiries@jamesgraham.dev | 🌐 jamesgraham.dev | ⑂ m-o-marmalade | **in** james-graham-surf

Summary

Hello! I have experience with, and passion for, creating highly responsive & performant games and tools. I have extensive experience in digital audio and music, and some moderate experience with 2D & 3D graphics and UI. I'm proficient in a variety of languages, but C++ is my specialty. I'm currently working on an embedded project and a 3D game in Godot in my free time.

Career

Accountant, Assistant & Web Consultant   *Colton, CA*

GRAHAM ENTERPRISES   *Aug 2017 - Present*

- Approximately doubled the amount of clients appraisers could take on by handling customer service, data-entry, photography and deliveries.
- Substantially reduced report turnaround time by designing a method to remotely submit report photography while out in the field.
- Reached new customers by improving our local SEO through Google My Business and some small updates to our web design.

Contributions

Bitcrusher for Godot | AUDIO EFFECT (DSP)   ⑂ *godot/pull/68768*

C++, VISUAL STUDIO, MSVC, SCONS   *Nov 2022*

- Maintained optimal runtime performance by implementing an efficient DSP algorithm, and intentionally keeping the feature's scope narrow.
- Met the needs of Godot's userbase by adding an audio effect which is used in the types of games that Godot is often used to create.
- Wrote concise code which follows the best practices of the organization, and integrates with a large and complex codebase.

Projects

jamesgraham.dev | DEVELOPER WEBSITE   🌐 *jamesgraham.dev*   ⑂ *m-o-marmalade/portfolio*

THREE.JS, JAVASCRIPT, CSS, HTML, WEBPACK, NPM, BLENDER   *Mar 2022 - Present*

- Developed an interactive water simulation in JavaScript which uses mouse/touch input to manipulate the normals of a refractive 3D mesh in Three.js.
- Achieved adaptive performance in Three.js by monitoring framerate at runtime and reducing rendering resolution when necessary.

Reform | MIDI-EDITING TOOL   🌐 *aqu.surf/reform*   ⑂ *m-o-marmalade/reform*

LUA   *Jun 2020 - Jun 2022*

- Saved hundreds of man-hours for users by providing an efficient way to edit large selections of MIDI data interactively.
- Ranked as the 2nd most popular Renoise tool; estimated to be deployed on hundreds of users' machines.
- Boosted performance by roughly over 100x by developing an API which fetches Renoise project data and then automatically caches it Lua-side.

Paddles | MIDI-CONTROLLED GAME   🌐 *aqu.surf/paddles*   ⑂ *m-o-marmalade/paddles*

LUA   *Jul 2020 - Mar 2022*

- Featured on the front page of the Renoise website's Tools section for 2 consecutive years.
- Implemented game audio by loading and editing instruments, effects, and MIDI pattern data into the current Renoise project at runtime.
- Built a 2D graphics rendering system from scratch in Lua, which displays to a grid of Renoise UI elements (colored buttons).

ConArtist | C++ CONSOLE/TERMINAL GRAPHICS LIBRARY   ⑂ *m-o-marmalade/ConArtist*

C++, WIN32 API, VISUAL STUDIO   *Mar 2023 - Apr 2023*

- Achieved framerates in the 1000's by implementing rendering optimizations in response to profiling analysis (lazy updating, color-based batching).
- Architected a Unicode-compatible ASCII graphics renderer with full ANSI color support, able to display 4-bit, 8-bit, and 24-bit colors simultaneously.
- Eased cross-platform development by writing highly portable C++, and decoupling the OS calls from the main systems of the library.

SNEK | CONSOLE/TERMINAL GAME   ⑂ *m-o-marmalade/SNEK*

C++, FMOD STUDIO, WIN32 API, CONARTIST, VISUAL STUDIO   *Jun 2019 - Apr 2020*

- Used FMOD Studio and its C++ API to playback music & SFX, beat-sync sound to player movement, and change DSP parameters based on score.
- Implemented user input, persistent high score saving, and graphical output through the ConArtist library, and the C++ Win32 API.

Skills

Technologies	C++, Lua, FMOD, HLSL, Godot, Unity, Embedded (Teensy, PlatformIO), Assembly (GBZ80)
Tools	Git (bash), Github, Visual Studio (C++), VS Code, Renoise, FL Studio, Blender, Aseprite, Photoshop
Interests	Drums & Percussion, Sound Synthesis, Music Production, Visual Art, Food, Nature, DDR, Retro Tech