

# Jacob Lowery

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Low-level programmer with 6+ years of experience, including 4+ years in industry and 2 years independently building native applications from the ground-up in C. Experienced with Win32, Direct3D 12, Vulkan, custom tooling, profiling, user interfaces, and CPU/GPU performance optimization.

## WORK EXPERIENCE

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### Games & Systems Programmer

**February 2024 - Present**

Independent project

Austin, TX

- Built a dependency-free multi-target codebase in C from scratch, working directly with OS APIs to provide layers for handling systems such as memory, networking, multithreading, graphics, audio, and UI.
- Developed a server-authoritative top-down online shooter built using an entirely custom engine.
- Designed and integrated a custom network protocol for latency-sensitive real-time communication with optional reliability guarantees implemented over raw UDP sockets.
- Utilized D3D12 & Vulkan to implement a CUDA-inspired RHI supporting compute-driven graphics pipelines and the rapid experimentation & integration of GPU techniques.
- Built custom tooling and build-infrastructure optimized for rapid iteration and short compile times, including the embedding, linking, and hot-swapping of assets and CPU/GPU code.

### Software Engineer

**January 2020 - February 2024**

Smarter Sorting

Austin, TX

- Built and maintained internal tools for use by regulatory experts to classify products containing hazardous materials.
- Owned customer-facing engineering projects and worked directly with external teams to deliver integrations and features on deadline.

### Junior Software Engineer

**August 2019 - January 2020**

Smarter Sorting

Austin, TX

- Investigated and resolved difficult bugs and performance bottlenecks across multiple teams using debugging and profiling tools.

### Intern

**May 2018 - September 2018**

Smarter Sorting

Austin, TX

- Developed automated web crawling and parsing tools to generate structured datasets for internal systems.

## EDUCATION

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### Austin Community College

**August 2019 - January 2020**

Computer Science coursework toward transfer

Austin, TX

## SKILLS

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**Languages** | C, C++, HLSL, Lua, Python

**APIs** | Win32 (e.g. Winsock, WASAPI), D3D12, Vulkan, tooling APIs (e.g., AMD GPU Services, PIX Event Runtime)

**Tools** | MSVC, Clang/LLVM, NVIDIA Nsight, AMD RGP, various debuggers, custom internal tooling