Andrew Borders

atborders1@gmail.com | (512) 739-3210 | aborders.dev

I'm a hands-on developer with a passion for computer graphics, music, and web development. I like learning, challenging myself, and collaborating with others. I'm currently seeking a software development position at a company that values mentorship and growth.

Education

University of Michigan — *Ann Arbor, MI*

College of Engineering, MSE of Computer Science — *Aug 2024 - Nov 2025*

College of Engineering, BSE of Computer Science — *Aug 2020 - May 2024*

- GPA: 3.80 | Dean's List
- Focus: Web Systems, Computer Graphics, Computer Architecture, Parallel Computing.

Work Experience

Lagena

Co-Founder and Full-Stack Developer — *May 2024 - Now*

- Developed a cost-effective method for rendering digital avatars, reducing cloud costs by 90%.
- Built a dynamic backend API for real-time, interactive avatars, integrating user authentication, low-latency streaming, efficient video processing, and third-party language/speech APIs.

Nonprofit Web Development — *Austin, TX*

Freelance Full-Stack Developer — *Feb 2020 - Now*

- Helped local nonprofits, including the Tapestry Foundation, establish and expand their online presence.
- Boosted community engagement and visibility through modern, SEO-friendly, professional websites.

WayWiser — *Austin, TX*

Backend Software Developer — *May 2023 - May 2024*

- Contributed to developing full-stack web application that empowers the caretaking network of elderly or disabled people more effectively communicate.
- Engineered an SMS-compatible AI as sista nt featuring acustom context management system (pre-MCP) to deliveruser-specific insights and memory, enhancing therelevance and personalization of user interactions.

Projects

WebGPU Projects

Rasterizer 🔗

- A Blinn-Phong rasterizer written in TypeScript, bundled with Vite, and using GitHub Actions for CI/CD.
- Features a dynamic 3d scene with rotating cubes, demonstating a next-gen rasterization pipeline for the web.

Shader Toy 🔗

- A WGSL pixel shader development environment written in TypeScript, bundled with Vite, and using GitHub Actions for CI/CD.
- Allows users to iterate on shaders with real-time syncax feedback and graphical updates. Ideal for learning, prototyping, and exploring GPU-based visual effects.

Verilog RISC-V Multiprocessor

- Worked with a team to design and optimize a RISC32 multiprocessor, minimizing clock speed and cycles per instruction.
- Implemented R10k architecture, N-way superscalar execution, GSHARE branch prediction, OoO loads, and I-cache prefetching.

Skills

Programming Languages: C++ | Python | TypeScript | JavaScript | Java | HTML | CSS | GLSL | CUDA | SQL

Technologies/Frameworks: Docker | Kubernetes | Terraform | Amazon Web Services | Google Cloud | Auth0 | React | PostgreSQL | MongoDB | Redis | WebGPU | Vulkan