

# Andrew Borders

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## Education

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### University of Michigan

*College of Engineering, BSE of Computer Science*

GPA: 3.80 | Dean's List

- Relevant Courses: Operating Systems, Web Systems, Computer Security, Computer Architecture, GPU Programming, Video Game Development

*College of Engineering, MSE of Computer Science*

- Areas of focus: Computer Architecture and Parallel Computing

**Ann Arbor, MI**

August 2020 - May 2024

August 2024 - May 2025

## Experience

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### Lagena

*Co-Founder and Full-Stack Developer*

- Designed and built a dynamic frontend using Next.js, React, and SCSS
- Collaborated on a backend api integrating stable diffusion, text-to-speech, and large language models for real-time avatar interaction.

May 2024 - Present

### WayWiser

*Backend Software Development Internship*

- Created an SMS-integrated AI assistant using OpenAI's API
- Encoded conversations and user data in a vector database, increasing the AI assistant's context size by allowing it to query relevant info through the database

**Austin, TX**

May 2023 - May 2024

## Projects

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### Verilog RISC-V Multiprocessor

*Group Project*

- Wrote a RV32+M multiprocessor with R10k architecture, N-way superscalar execution, GSHARE branch prediction, OoO loads, and I-cache prefetching

Aug 2024 - Dec 2024

### WebGPU Renderer

*Independent Project*

- Wrote a real-time blinn-phong renderer in Web-GPU, the successor to WebGL
- Hard-coded a scene with dynamic objects, lighting, and camera
- Set up CI/CD, generating and deploying a static site through github actions

Aug 2024 - Sep 2024

### CUDA Fractal Zoom Renderer

*Independent Project*

- Build an efficient fractal zoom renderer in CUDA with dynamic parallelism and temporal caching

Nov 2024 - Jan 2025

### Nonprofit Web Development

*Freelance Work*

- Designed and maintained static sites, giving local non-profits internet presence

Feb 2020 - Present

## Skills

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*Programming Languages:* C++ | GLSL | CUDA | Python | Go | Javascript | SQL | HTML | (S)CSS

*Technologies:* AWS | Vulcan | WebGPU | Redis | MongoDB | Vector Databases | DNS | REST API | Blender |

FL Studio | Radiant Black | React