Grace Jin

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EDUCATION

Cornell University, College of Engineering — Expected May 2027

B.S. Computer Science, Minor in Artificial Intelligence

- **Relevant Courses:** Data Structures and Algorithms, Artificial Intelligence, Computer Graphics, Systems Programming and Operating Systems, Digital Logic and Computer Organization
- **Organizations:** Cornell XR Project Team Co-Founder, Rewriting the Code, Women in Computing at Cornell

EXPERIENCE

Perception Software Engineering Intern | Cepton Technologies, San Jose, CA — May 2025 – Aug. 2025

- Built a real-time WGPU-accelerated 3D visualization pipeline on Linux systems to simulate LiDAR data rendered over synthetic driving geometries at 60+ FPS
- Implemented WGSL compute shaders to perform parallel raycasting for real-time hit detection and data collection
- Built a 3D environment reconstruction system to generate simulator-ready depth maps integrated within GPU pipeline
- Optimized Rust legacy code to use standard transformation techniques such as matrix SVD and affine transforms, reducing computation time by 40% in internal benchmarks

Lead Software Developer | Cornell Center for Teaching Innovation, Ithaca, NY — Oct. 2024 – Present

- Develop 3D Unity visualizations of Gauss's Law and EM waves for a 500+ student electromagnetism course with 2000+ playthroughs, funded by a grant for exemplary educational projects
- Support 30+ students prototyping AR/VR apps on Meta Quest, Unity and Snap OS

Software Developer | Cornell People and Robots Teaching and Learning (PoRTaL), Ithaca, NY — Aug. 2024 – May 2025

- Engineered a PyGame interface to generate thousand-line JSON specs for an LLM planning benchmark, cutting significant manual programming time for team of 12
- Implemented 20+ custom training tasks in PDDL to improve LLM reasoning with complex and asynchronous tasks

Web Developer | Space Systems Design Studio, Ithaca, NY — Jan. 2024 – Present

- Lead the development of 2 React/Next.js websites promoting NASA-affiliated spacecraft projects, attracting 3000+ visits
- Serve additionally as Publicity Lead, driving frequent press coverage and campus outreach up to both projects' launch

PROJECTS

Graphics Rasterizer Engine - Custom 3D Rendering [GitHub] | C++, SDL2, CUDA, Blender — Jul. 2025 – Present

- Build a graphics renderer from scratch with a multi-pass rendering pipeline and BVH partitioned ray tracing capable of rendering 50k+ vertices at 30+ FPS
- Implement a 3D engine with SDL2 to bridge user input with hierarchical object editing and animation
- Migrating to CUDA for GPU parallelization with a current 5x performance improvement over the CPU implementation

Zoodini - Co-Op Stealth Game [Demo] | Java, LibGDX, Tiled — Jan. 2025 – Jun. 2025

- Led an Agile team of 6 to develop a 20+ level escape game and developed guard AI backend module with A* pathfinding

NeuroScent - MIT Reality Hack "Smart Sensing" Winner [DevPost] | C#, Unity, OpenBCI, Arduino — Jan. 2025

- Led team of 5 to develop an immersive VR olfactory biofeedback system and Galea EEG data processor for mental well-being enhancement, won out of 400+ competitors
- Integrated Unity to render calming scenes and trigger Arduino-controlled diffusers upon detecting abnormal biofeedback

Personal Website | WebGL, Three.js/GLSL, Javascript, HTML, CSS — Nov. 2024 – Present

- Implement procedural WebGL shader projects and Three.js rubik's cube with solving algorithm

Computer Science Content Creator [Instagram] — Aug. 2019 – Present

- Built an audience of 18K+ followers and 3M+ video views by posting computing topics, personal projects and digital art

SKILLS

Computer Languages: Python, Javascript, Typescript, HTML, CSS, Java, C++, C, Rust, ARM Assembly, SQL
Web Technologies & Frameworks: Three.js, React, Vue, Django, OpenGL, WebGL, Vulkan, WebGPU, WGSL
Development Tools: Linux, Git, CUDA, GCC, GDB, RTOS, Docker, Gradle, CI/CD, Unity, Figma, Blender