Grace Jin

San Jose, CA | (408) 750-7200 | gsj33@cornell.edu | gracejin.dev | github.com/gracejinsotrue | linkedin.com/in/grace-jin-cornell

EDUCATION

Cornell University, College of Engineering — Expected May 2027

B.S. Computer Science, Minor in Artificial Intelligence

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

WORK EXPERIENCE

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

- Built a real-time WGPU-accelerated 3D visualization pipeline to simulate raw LiDAR data rendered over synthetic geometries for safe driving simulations at 60+ FPS
- Implemented WGSL compute shaders for parallel raycasting, enabling geometry hit detection and accurate data collection
- Optimized Rust legacy code to use standard transformation techniques such as matrix SVD and affine transforms, reducing computation time by 40% on mid-level computers

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

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

Cornell Center for Teaching Innovation, Ithaca, NY | Teaching Assistant — October 2024 – Present

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

Space Systems Design Studio, Ithaca, NY | Software Developer — January 2024 – Present

- Lead the development of 2 educational React and Next.js websites with 1000+ visits, featured in the Cornell Chronicle
- Design 50+ cubesat unit tests by flashing C code to hardware in a Class 10,000 cleanroom

SELECTED PROJECTS

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

- Create real-time 30+ FPS graphics renderer from scratch with multi-pass rendering pipeline and BVH partitioned ray tracing
- Build a 3D engine with SDL2 to support hierarchical object transforms, multi-material shaders, and orbital camera controls
- Migrating to CUDA for GPU parallelization with a current 5x performance improvement over my CPU implementation

Zoodini - Co-Op Stealth Game [Demo] | Java, LibGDX, Tiled — January 2025 – June 2025

- Led an Agile team of 6 to develop a 20+ level escape game and coordinated sprint planning, task distribution and playtesting
- Developed the guard AI backend module with A* pathfinding and produced all game art assets for a visually striking aesthetic

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

- Led team of 5 in developing an immersive VR olfactory biofeedback system and Galea EEG data processor to enhance mental well-being, won out of 400+ competitors
- Integrated Unity to render calming environments and trigger Arduino-controlled scent diffusers upon detecting abnormal biofeedback (i.e., stress, hyperventilation)

Personal Website [Website] | WebGL, GLSL, Javascript, Three.js, HTML, CSS — November 2024 – Present

- Includes custom GLSL shaders to map video textures onto a 3D Rubik's Cube, drag-based interaction and solving algorithm

Computer Science Content Creator [Instagram] — August 2019 – Present

- Curated an audience of 18K+ followers and 3M+ video views by blogging personal projects and computer science topics

SKILLS

Computer Languages: C, C++, Rust, Python, Javascript, Typescript, SQL, Java, Verilog, ARM Assembly, HTML, CSS
Frameworks & Web Technologies: React, Next.js, Vulkan, WGSL, OpenGL, WebGL, Three.js, Django, Langchain
Development Tools: Git, Linux, Gradle, Unity, CI/CD, Figma, Adobe Photoshop, GIMP, Blender