Grace Jin

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EDUCATION

Cornell University, College of Engineering <div align="right">Expected May 2027</div>

B.S. Computer Science, Minor in Artificial Intelligence, GPA: 3.2/4.0
- **Relevant Coursework:** Data Structures and Algorithms, Systems Programming and Operating Systems, Digital Logic and Computer Organization, Artificial Intelligence, Computer Graphics, Web Development
- **Organizations:** Grace Hopper Celebration, Cornell XR Project Team Co-Founder, Rewriting the Code, WICC

EXPERIENCE

Software Engineering Intern | Cepton Technologies, San Jose, CA <div align="right">May 2025 – Aug. 2025</div>
- 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 ML model training data collection
- Built a 3D environment reconstruction system in Rust to generate simulator 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 <div align="right">Oct. 2024 – Present</div>
- 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 <div align="right">Aug. 2024 – May 2025</div>
- 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+ in-game cooking tasks with PDDL, improving LLM reasoning with complex and asynchronous tasks

Web Developer | Space Systems Design Studio, Ithaca, NY <div align="right">Jan. 2024 – Present</div>
- Lead the development of 2 React/Next.js websites promoting NASA-affiliated spacecraft projects, attracting 3000+ visits
- Serve additionally as Publicity Lead, spearheaded crowdfunding campaigns raising $10,000+ through coordinated outreach and secured regular press coverage leading up to both project launches

PROJECTS

Graphics Rasterizer Engine - Custom 3D Rendering [GitHub] | C++, SDL2, CUDA, Blender <div align="right">Jul. 2025 – Present</div>
- Build a custom 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 <div align="right">Jan. 2025 – Jun. 2025</div>
- Led an Agile team of 6 to develop a 20+ level escape game and coordinated sprint planning and playtesting
- Developed the guard AI backend module with A* pathfinding and produced all game art assets

NeuroScent - MIT Reality Hack "Smart Sensing" Winner [DevPost] | C#, Unity, OpenBCI, Arduino <div align="right">Jan. 2025</div>
- 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 <div align="right">Sep. 2024 – Present</div>
- Implement procedural WebGL shader projects and Three.js rubik's cube with solving algorithm

Computer Science Content Creator [Instagram] <div align="right">Aug. 2019 – Present</div>
- Built an audience of 18K+ followers and 3M+ video views by posting computing topics, personal projects and digital art

SKILLS

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