Jacqueline Guan

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Education:

University of Pennsylvania, School of Engineering and Applied Science — Anticipated: May 2026
MSE in Computer Graphics and Game Technology — GPA: 4.0

- Courses: Game Design Practicum, Advanced Rendering, Computer Animation, Interactive Computer Graphics, Production Pipelines, 3D Modeling

Drexel University, Pennoni Honors College — June 2024
Bachelor of Science in Computer Science, Minor in Graphic Design — GPA: 3.96

Skills:

Programming Languages: C++, Python, Java, GLSL, React, Typescript, Javascript, C, C#, Bash, HTML, CSS
Tools: Git, OpenGL, Unity, Unreal Engine 5, Maya, MotionBuilder, VSCode, Unix Systems, Asana

Projects:

That's My Tofu | Unity VR *(https://youtu.be/bA2FPyFT_18)* — April 2025 - Present

- Co-developed a VR cooking game in Unity with real-time interaction systems, physics-driven gameplay, and resource management using C# scripting and VR toolkits

Boids GPU Simulation | C++, CUDA *(github.com/jyguan18/Project1-CUDA-Flocking)* — September 2025

- Implemented a real-time particle flocking simulation for 5,000+ agents using CUDA, achieving ~10x performance improvement over naive CPU implementation while developing efficient algorithms for neighbor searches and agent updates

Mini-Minecraft C++, OpenGL *(https://vimeo.com/1052431663?share=copy#t=0)* — November 2024

- Teamed up with 2 peers to develop a Minecraft-inspired 3D game featuring procedural terrain generation, real-time physics, and custom water shaders

Work Experience:

QuotaPath — Philadelphia, PA
Full-Stack Software Engineer — April 2022 - May 2023

- Led full-stack development of 7 customer-tailored React dashboards to monitor sales commissions of over 450 marketing employees, streamlining marketer performance analyses
- Implemented administrative actions and payout configurations via Python RESTful API calls and ETL database operations across microservices, supporting > 1,000 payout calculations monthly
- Conducted end-to-end testing of business-critical workflows to model appropriate historical sales data

Lockheed Martin, Advanced Technology Laboratories — Cherry Hill, NJ
Computer Systems Analyst — April 2021 - March 2022

- Resolved 230+ technical support tickets by troubleshooting device networking, account permissions, and user permissions in a hybrid enterprise environment
- Delivered and configured 60+ physical and virtual machines (Windows, Mac OS, Linux), leveraging virtualization (VirtualBox) to reduce device setup and troubleshooting time by ~75%
- Supported technology teams by managing distribution of hardware/software and maintaining databases for enterprise resource tracking

Students Tackling Advanced Research (STAR) Project — Philadelphia, PA
Researcher — July 2020 - September 2020

- Enhanced open-source eye tracking software with modern web technologies (HTML, CSS, Javascript) to support data-driven research with 15 participants on visual behavior
- Collected and analyzed user interaction data, synthesizing findings into presentations, demonstrating strong analytical and problem-solving skills