Vivian Gu

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Education

Georgia Institute of Technology *Expected: May 2027*
B.S. in Computer Science + Media, Minor in Mathematics
- GPA: 3.91/4.00

Experience

Software Development Engineer Intern *Santa Monica, CA*
Amazon (Private Brands Intelligence) *May 2025 - August 2025*
- Designed and implemented an LLM-powered analysis tool to assist product managers in identifying anomalies in forecast files, reducing manual investigation time by 80%.
- Developed a scalable serverless architecture using AWS S3, Lambda, and Bedrock Agents with dynamic action group integration.
- Iterated on technical design document, collaborating with team to evaluate architectural options and select an approach aligned with the problem requirements.

Undergraduate Researcher *Atlanta, GA*
Robotic Musicianship Lab *Dec 2024 - Present*
- Developed computer vision–based response behaviors for a robotic musician, enabling dynamic adaptation to human head gestures.
- Built gaze-based interaction systems and gestures for a VR robot using Unity and Meta XR packages.

Developer and Project Lead *Atlanta, GA*
VGDev Club *Aug 2023 - Present*
- Leveraged C# and Rust scripts to develop and refine core game mechanics, enhancing responsiveness and player experience.
- Directed a team of 30 students in the design and development of a complete game, managing 4 subteams.

Projects

Restaurant Reservation System — Java, Bootstrap
- Implemented a full-stack Java web application in a Scrum environment, allowing users to create profiles, make reservations, and gain loyalty points.
- Executed terminal and front-end parity via layered architecture and API requests, effectively storing and updating back-end data such as restaurant availability and loyalty points.

Cellary Kitchen Management — Python, Flask, HTML/CSS, Bootstrap
- Led a Flask project to integrate a computer vision model into a digital kitchen inventory management system, resulting in an automated process for tracking ingredients which encouraged reduced food waste.
- Allows for quick scanning of grocery pictures and adjusting of inventory quantities, implemented through a REST API for handling requests between the front-end and back-end.

Personal Portfolio Website — HTML/CSS, Javascript
- Developed a responsive webpage using HTML and CSS, enhancing information display across devices.
- Leveraged JavaScript event handlers and queries to implement responsive sliding galleries and pop-ups, improving interactivity and engagement on the site.

Technical Skills

Languages: Java, Python, HTML, CSS, C, C#, GLSL

Frameworks and Tools: Git, AWS (S3, Lambda, Bedrock, IAM), Bootstrap, Flask, Unity