

# Allison Lu

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## Education

### Georgia Institute of Technology Master of Science in Computer Science

Aug. 2023 – May 2024

Concentration: Computer Graphics, GPA: 4.0

### Georgia Institute of Technology Bachelor of Science in Computer Science

Aug. 2020 – May 2023

Concentration: Intelligence and Media, GPA: 3.89

## Skills

**Programming Languages:** Javascript, Python, C#, Java, C++, C, HTML, CSS

**Framework/Libraries:** Node.js, React.js, Flutter, Machine Learning, AI, NumPy, Pytorch, scikit, MongoDB, Firebase, SQL, AWS, Serverless, VR, AR, Oculus, Vive, Unity, Unreal Engine, Magento2, Processing, OpenGL, Unix, .NET, HTTP

**Misc:** English, Mandarin, Cantonese, 3D Math, Agile Development

## Work Experience

### ADP – Global Product and Technology Intern

May 2023 – Aug. 2023

- Created a generic AWS Step Function Monitor to automatically detect and locate errors in real time, resulting in a significant decrease in time needed to recognize and fix issues
- Utilized AWS Lambdas, Serverless, and Node.js to create a Slack bot that sends alerts and updates regarding hundreds of executions, which increases accessibility of Step Function execution information between various teams

### Aprio – Data & Analytics Intern

Nov. 2021 – May 2022

- Developed a .NET Razor Pages web application with a HTML/CSS/JS frontend, and a C# backend with a SQL database to upgrade client software by migrating it to a cloud web application
- Constructed a demo client portal that uses Tableau REST API to display hundreds of dashboards and views for clients

## Projects

### Outdoor Visual Positioning – App Developer

- Used Flutter and ResNet-152, pre-trained on ImageNet1k, to create a phone app that differentiates between 19 buildings on Georgia Tech campus with images, GPS location, and phone orientation
- Filtered building dataset with user GPS location and orientation to increase building recognition accuracy from 72% to 86%
- Compared the accuracy the CNN with the SIFT algorithm to find the highest accuracy method for labeling buildings

### Metro Atlanta Trail Report – Full Stack Programmer

- Mobilized a MERN stack to create an interactive web app for users to find and interact with the 250 trails in the Atlanta area
- Created a MongoDB database to be used as the central location for aggregated data from public government ArcGIS maps
- Engineered a React application to display an interactive map with a pin system for users to communicate problems with Root Local and government officials to better maintain trails

### VR Help for AMD – AR/VR Research Assistant

- Prototyped HTC Vive and Oculus Quest Pro mixed reality applications to help easily doctors diagnose the shape, size, and location of AMD patients' blind spots
- Built AR visual cues for patients using SRworks, OculusXR, OpenXR, C# and Unity

### VR Navigation Study with Omni Treadmill – Unity, VR Programmer

- Imported and integrated a Matterport scanned 3D model with Unity, Virtuix Omni Treadmill and HTC Vive to allow for a photorealistic VR walkthrough experience of the J.S. Coon building
- Designed and created a VR town to research how Omni navigation affects spatial memory of landmarks and locations

## Leadership

### Video Game Development Club – President

Jan. 2022 – Dec. 2023

- Cultivated an encouraging and educational game development environment for 200+ students
- Led and supported 25 team leads to develop 24 unique quality video games over 4 semesters
- Hosted an overnight Global Game Jam site to foster an opportunity for the 100 attendees to grow their network and skills
- Doubled VGDev's campus outreach and member count by publicizing organization activities at events and on social media

### WreckCon Organization – Secretary

Jan. 2023 – May 2024

- Organized the convention WreckCon with an attendance of 2000+ to celebrate Georgia Tech organizations
- Facilitated and managed 50+ volunteers and organization members to help organize and run the event with minimal problems