

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
- Utilizing GPT-2 for Image Captioning – ML Engineer**
- Designed a transformer-based architecture that utilizes pretrained GPT-2 and ViT to caption an image input with competitively accurate captioning with a CIDEr score of 60.3
 - Automated the calculation of metrics, CIDEr and Bleu to score the accuracy of the captions being output by the model
- 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

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