Vinay Komaravolu

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https://github.com/vinaykomaravolu

Work Experience

Vulkan Software Developer Intern
AMD, Markham, Ontario, Canada **May 2019 – May 2020**

Vulkan

- Part of the **Vulkan Virtualization** team which oversees debugging and modifying Vulkan drivers for the API and latest graphics cards.
- Optimized and extended Vulkan drivers for performance and stability using **C++**.
- Worked with AMD partnered game and software developers in debugging their applications for release.

Google Stadia

- Took ownership of Google Stadia's internal test bundle that is used by various teams in AMD.
- Improved work efficiency for AMD teams by implemented multiprocessing **Python/Bash** automation scripts for the internal test bundles.
- Improved Vulkan paradigms and performance of their software by working with Google Stadia team in debugging, testing, and implementing example applications.

Skills

Languages: C++, Python, C, C#, GLSL, JavaScript
Web Development: React, MongoDB, Electron
Graphics: OpenGL, Vulkan, Unity
Technologies: Git, Bash, Visual Studio, Linux OS,Visual Studio Code, CMake, Teamcity, Reviewboard, Perforce

Projects

Lumen

- Lumen is a 3D platformer developed in **Unity**, with growing/shrinking mechanics and an emphasis on fast-paced "speed running" gameplay using a dynamic movement system.

Cyberity Insider Threat Detection

- A Startup where our product focuses on detecting insider threats within financial institutions.
- Uses unsupervised machine learning models to identify real time user data logs as threats.
- Built with react to be responsive, minimalist, intuitive and easy to learn.
- Gives security teams quicker insider threat investigations and containment times.

OpenGL Graphics Engine

- A 3D Graphics Engine that was used to implement a 3D Display Simulation using Face tracking and an OpenGL text editor that compiles/runs python code.
- Implemented a graphics engine using **OpenGL**, **OpenAL**, **GLFW**, **GLM**, and several other C++ libraries
- Fragment, Vertex, and Geometry shaders were written in GLSL and were used to create lighting, movement, and materials for object texture mapping.

Roam Android application

- An Android application that allows users to take pictures of environmental issues and upload them to Firebase, where the images will be processed and tagged using the A.I. Platform of Microsoft Azure and placed into a database.
- Worked in a team to develop an Android application in Java and Kotlin using Android studio
- Developed the backend server on Google's **Firebase** Cloud Platform

Other Projects

- All projects can be found at **https://github.com/vinaykomaravolu**

Education

Honors Bachelor of Science, University of Toronto
BSc. Computer Science **2016 – 2021**
Dean's List Scholar