Vinay Komaravolu

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https://github.com/vinaykomaravolu

Education

Honors Bachelor of Science, University of Toronto
GPA: 3.6
BSc. Computer Science **Sep 2016 – May 2021**
Dean's List Scholar

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. Debugged games with passthrough configurations and VM configurations
- 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 implementing 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
- Compiled findings of Vulkan extension optimization that was tested on **Linux VM's** for the Stadia team

Skills

Languages: C++**,** Python, C, C#, GLSL, JavaScript**,** TypeScript, Bash
Web Development: React, MongoDB, Electron, Flask, Heroku, Github Actions, TailwindCSS
Graphics: OpenGL, Vulkan, Unity
Technologies: Git, Visual Studio, Linux OS, Visual Studio Code, CMake, TeamCity, Perforce, Docker**,** VirtualBox, Figma

Projects

Cyberity Insider Threat Detection

- A startup web application focused on detecting insider threats within financial institutions
- Uses unsupervised machine learning models to identify real time user data logs as threats, which give security teams quicker knowledge regarding these threats and their containment times
- Built the front-end with **React** to be responsive, minimalist, and intuitive
- Built the back end with **Flask** and used a **NoSQL** (**MongoDB**) database

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 python code
- Implemented the engine using **OpenGL**, **OpenAL**, **GLFW**, **GLM**, and several other C++ libraries

DaTeam SDC Application

- Web application with a minimalistic and crisp design that allowed doctors to easily create/view/modify standardized medical notes and store them in a database. This data can then be processed by health organizations
- Built using **React**, **TailwindCss**, **ExpressJS**, and **SQL**
- Hosted on **Heroku** using **Docker** images which allowed for easy testing, building, and running of applications

Lumen Unity Game

- 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
- Implemented the physics-based mechanics and a responsive UI in **C#**

*All projects and others can be found in the GitHub page.