VINAY KOMARAVOLU

vinay.komaravolu@gmail.com
https://vinayk.dev
Toronto, Canada
https://github.com/vinaykomaravolu

Skills

LANGUAGES:
C++
Javascript
C
Typescript
Python
GLSL
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

Education

University of Toronto
Sept. 2016 to May 2021

Bachelor of Science, Computer Science 2021
Dean's List Scholar

Employment

Advanced Micro Devices
Markham, Ontario, Canada

Vulkan Software Developer Intern
May 2019 to May 2020

Vulkan

- Part of the **Vulkan Virtualization** team which oversees debugging and modifying Vulkan drivers and API for the 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

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#**