Gabriel Mukobi

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Game programmer with experience in game development, virtual reality, and software engineering.

Summary:

Programmer, researcher, and student passionate about games, virtual reality, and entertainment who is eager to build the future of real-time interactive digital experiences. Previous experience in game development, VR, research, and software engineering in both small-team and corporate environments.

Experience:

Tools Programmer Intern, Epic Games, Virtual Production Tools - Sept 2020-Jan 2021 - unrealengine.com

Engineering new virtual production tools for Unreal Engine 4 as an intern on the Virtual Production Tools team in order to enable the future of virtual production filmmaking workflows in UE4. Skills: Unreal Engine 4, C++.

Research Programmer Intern, Epic Games, Research - June 2020-Sept 2020 - unrealengine.com

Created deep reinforcement learning samples in Unreal Engine 4 and guided the development of a plugin to facilitate the use of UE4 for AI and ML applications. Skills: Unreal Engine 4, C++, research, reinforcement learning, Python, PyTorch.

VRITS Programmer, Virtual Human Interaction Lab - Sept 2019-Sept 2020 - vhil.stanford.edu

Built VR experiences as a Virtual Reality Intensive Training Seminar (VRITS) programmer at Stanford University's Virtual Human Interaction Lab (VHIL) that are actively used in research, demos, and tours. Skills: Unity, C#, UE4, C++, virtual reality, Blender.

Google Engineering Practicum Intern, Google Cloud Platform - June 2019-Sept 2019 - github.com/knative-portability

Developed several full-stack open-source applications as proof of portability for Knative, an open-source platform for serverless containerized workloads. Skills: Python, Flask, MongoDB, CI/CD, testing, OAuth 2.0, Node.js, Express.js, TypeScript, PostgreSQL.

Selected Projects:

Rogue Starfighter VR - Personal Project - Feb 2020-Mar 2020 - gameplay video - github.com/mukobi/Rogue-Starfighter-VR

Rogue Starfighter VR is a virtual reality Star Wars X-wing flight simulator fan-game. In it, the player experiences the full scale and power of the space combat from a galaxy far, far, away behind the controls of a fully-interactive T-65B X-wing starfighter.

Virtual Becomes Reality - Virtual Human Interaction Lab - Dec 2019-Aug 2020 - project page

Virtual Becomes Reality combines the Virtual Human Interaction Lab's many lab tour demos and research findings into a self-contained VR experience. As one of more than a dozen people involved with the project, I developed a multitude of gameplay features and earned 1 of 2 Senior Programmer credits.

UnSoundBoard - Personal Project - August 2020 - github.com/mukobi/UnSoundBoard

I play Dungeons and Dragons online with friends, and I wanted a soundboard to play sounds through a virtual microphone over Zoom. Unfortunately, I didn't like any of the free soundboards available, so I built my own in Unreal Engine 4 with personalized features.

Skills:

Game Development - Unreal Engine, Unity, gameplay programming, virtual reality, Blender, 3D modelling, computer graphics, DirectX, OpenGL, technical art. Languages: C++, C#, Python. - software.gabrielmukobi.com/games

Software Engineering - design principles, agile development, product management, documentation, unit testing, bug reporting, code review, data structures, algorithms, CI/CD, debugging, IDEs, command line, Linux, Git, Perforce, GitHub, GitLab. Languages: C++, C#, C, Python, Java. - software.gabrielmukobi.com

Artificial Intelligence - machine learning, deep learning, reinforcement learning, Bayesian networks, logic, research, PyTorch, TensorFlow, Keras. Languages: Python.

Web Development - full-stack, web design, databases. Languages: JavaScript, Node.js, Python. - software.gabrielmukobi.com/web

Education:

Stanford University - B.S. Computer Science - Sept 2018-June 2023 (rising third-year student on a gap year) - Cumulative GPA: 3.97

Coursework in: Computer Graphics, AI, HCI, Algorithms, Data Structures, Probability, Computer Systems, Linear Algebra.

Interests:

Photography, digital 3D art, filmmaking, music performance, video and tabletop gaming, fantasy, and science-fiction.