

# Gabriel Mukobi

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## 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:

**Gameplay Engineering Intern, Riot Games** - June 2021-Sept 2021 - Remote - [riotgames.com](https://riotgames.com)

Designed and implemented core features as a Software Engineering Intern on the gameplay team of Project L, Riot Games' unreleased fighting game set in the League of Legends universe. Skills: Unreal Engine 4, C++.

**Research Programmer Intern and Tools Programmer Intern, Epic Games** - June 2020-Jan 2021 - Remote - [unrealengine.com](https://unrealengine.com)

Created deep reinforcement learning samples in Unreal Engine and a plugin to facilitate the use ML in UE4. Engineered tools to predict LED wall moiré and other issues to improve Unreal Engine virtual production shoots. Skills: Unreal Engine 4, C++, Python.

**VRITS Programmer, Virtual Human Interaction Lab** - Sept 2019-Sept 2020 - Stanford, CA - [vhil.stanford.edu](https://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 - Seattle, WA - [github.com/knative-portability](https://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](https://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-June 2021 - [Steam page](#)

Virtual Becomes Reality combines VHIL's lab demos and almost 2 decades of research 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 Technical Lead and Senior Programmer credits. Premiered 2020 at the Cannes XR festival and Tribeca Film Festival, released 2021 on Steam.

**Knative Portability - Google Cloud Platform** - June 2019-Sept 2019 - [github.com/knative-portability](https://github.com/knative-portability)

A collection of full-stack open-source web applications built as a proof of portability for Knative, an open-source platform for serverless containerized workloads. Notable applications: [Kubercade](#) (social virtual arcade) and [Large Events](#) (event organizer).

## Skills:

**Game Development** - [software.gabrielmukobi.com/games](https://software.gabrielmukobi.com/games)

Unreal Engine, Unity, gameplay programming, tools programming, virtual reality, Blender, 3D modelling, computer graphics, technical art. Languages: C++, C#, Python.

**Software Engineering** - [software.gabrielmukobi.com](https://software.gabrielmukobi.com)

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.

**Artificial Intelligence**

Machine learning, deep learning, reinforcement learning, research, logic, PyTorch, TensorFlow, Keras. Languages: Python.

**Web Development** - [software.gabrielmukobi.com/web](https://software.gabrielmukobi.com/web)

Full-stack, web design, databases. Languages: JavaScript, Node.js, Python.

## Education:

**Stanford University** - B.S. Computer Science - Sept 2018-June 2022 (current third-year student) - Cumulative GPA: 3.97

Coursework: Computer Graphics, AI, Algorithms, Data Structures, Systems. [Stanford XR](#) President, [Stanford AltPro](#) Awareness Lead.

## Interests:

[Photography](#), [digital 3D art](#), [filmmaking](#), [music performance](#), video and tabletop gaming, fantasy, and science-fiction.