

# Gabriel Mukobi

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## Summary:

Energetic digital creator and undergrad student who is passionate about games, virtual reality, and entertainment. Eager to join a fast-moving company as an intern to build the future of real-time interactive digital experiences while working in a collaborative and high-responsibility environment. Experienced in game, VR, and software development in both small-team and corporate environments.



## Experience:

**Research Programmer Intern, Epic Games** - June 2020-September 2020 - [epicgames.com](https://epicgames.com)

Created reinforcement learning sample projects in Epic Games' Unreal Engine 4 and guided the development of an engine plugin to facilitate the use of UE4 for artificial intelligence and machine learning applications.

**VRITS Programmer, Virtual Human Interaction Lab** - Sept 2019-September 2020 - [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++, Blender, virtual reality, OpenVR, Oculus.

**Google Engineering Practicum Intern, Google Cloud Platform** - June 2019-Sept 2019 - [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. Learned software engineering skills and tested Google's Knative implementation, Cloud Run. Skills: Python, Flask, MongoDB, CI/CD, unit/coverage/integration testing, OAuth 2.0, Node.js, Express.js, TypeScript, PostgreSQL, Mocha.js, Chai.js.

Took internal classes on machine learning with TensorFlow and programming in Golang.

**Freelance Web and Software Developer, Sticks and Stones Software** - Sept 2017-June 2019 - [software.gabrielmukobi.com](https://software.gabrielmukobi.com)

Performed freelance web, mobile, and desktop development through my company, Sticks and Stones Software. Skills: software engineering, product delivery, Node.js, React, Vue.js, PHP, HTML5, CSS, JavaScript, web APIs, SQL and NoSQL database management, VCS.

**Software Engineering Intern, Portland State University, Ralf Widenhorn Physics Lab** - June 2017-Mar 2018 - [github.com/mukobi/poxyz-clone](https://github.com/mukobi/poxyz-clone)

Developed software for a high accuracy positioning device, Pozyx, and implemented it as a physics education tool. Skills: Python, Java, GUIs.



## Selected Projects:

**Rogue Starfighter VR - Personal Project** - February 2020-March 2020 - [gameplay video](#) - [github.com/mukobi/Rogue-Starfighter-VR](https://github.com/mukobi/Rogue-Starfighter-VR)

Rogue Starfighter VR is an immersive 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.

**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](#) (a social virtual arcade) and [Large Events](#) (an event organizer).

**PieWallet - Freelance** - July 2018-May 2019 - [github.com/mukobi/PieWallet](https://github.com/mukobi/PieWallet)

PieWallet is a hybrid cryptocurrency wallet and social media web app built in PHP and JavaScript as a freelance project (imagine crypto+Venmo). Required knowledge in [social networks](#), [API design and public API calls](#), and [blockchain and cryptocurrency](#).



## Skills:

**Game Development** - very experienced - Unreal Engine, Unity, gameplay programming, Blender, virtual reality, computer graphics, DirectX, OpenGL, 3D modelling, shaders. Languages: C++, C#, Python. - [software.gabrielmukobi.com/games](https://software.gabrielmukobi.com/games)

**Software engineering** - very experienced - S.O.L.I.D. design principles, agile development, documentation, unit testing, code review, integration testing, bug reporting, CI/CD, debugging, IDEs, command line, Linux. Languages: C++, C#, C, Python, Java. - [software.gabrielmukobi.com](https://software.gabrielmukobi.com)

**Machine learning** - experienced - deep neural networks, regression, classification, clustering, support vector machines, Markov decision processes, TensorFlow, Keras. Languages: Python, C++.

**Web development** - very experienced - full-stack, HTML5, RESTful API design, NoSQL and SQL databases, responsive design, Webpack, Babel, serverless, Docker, Kubernetes, Google Cloud. Languages: JavaScript, Node.js, Python, PHP. - [software.gabrielmukobi.com/web](https://software.gabrielmukobi.com/web)

**Version control systems** - very experienced - Git, Perforce, [GitHub](#), [GitLab](#), open-source contribution.



## Education:

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

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

**Camas High School** - 2014-2018, Math, Science, and Technology Magnet Program - Cumulative GPA: 4.0



## Interests:

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