

William Liu

Email: yuxuanliu9518@gmail.com | GitHub: <https://github.com/mast0rbill> | Portfolio: www.williamliu.dev

Languages: C#, C, C++, Java, Python, Go, JavaScript/TypeScript, HTML/CSS, Bash, asm, SQL

Tools: Unity, Android, Node.js, React.js, REST, GraphQL, SQL, MongoDB, Azure, AWS, Google Cloud, Linux

EXPERIENCE

Full Stack Developer - Wish (ContextLogic Inc.) (PYTHON, REACT, SQL) REMOTE, SEP 2020 - DEC 2020

- Engineered policies to automatically detect & issue penalties for poor merchant customer support.
 - Created intuitive and scalable frontend admin pages in React.js using GraphQL queries.
 - Developed automatic detection in Python with complex SQL queries to retrieve metrics.
- Upgraded & maintained Wish backend merchant policy frameworks **to support Wish IPO**.
 - Implemented maintainable backend APIs for REST & GraphQL with MongoDB.

Full Stack Developer - Spatial Systems Inc. (C#, JSX, GO) SAN FRANCISCO, JAN 2020 - MAY 2020

- Individually prototyped and shipped Stadia-style streaming service** with Unity client in the cloud.
 - Became the **most popular platform by customer usage**, greatly increasing product reach.
- Developed Spatial's backend API in Go with MongoDB & webapp frontend in React.js.
 - Created Go server on AWS to automatically spin up streaming clients at start of meeting.

Augmented Reality Developer - Spatial Systems Inc. (C#, C++, JAVA) NEW YORK, APR 2019 - SEP 2019

- Ported the entire Spatial app to Oculus Quest** with Android Studio & Unity using Java, C++ & C#.
 - Created an Android WebRTC solution in Java, enabling use of screenshare & webcam.
 - Used C++ to facilitate interop between Java and .NET, **speeding up rendering by 500%**.
 - Implemented a native Android browser, enabling live document editing on device.
- Developed and presented important features **directly to corporate partners with Spatial CEO**.

PROJECTS

Paxitium - Multiplayer Survival Game (UNITY, C#) <https://www.indiedb.com/games/paxitium>

- Reached **#1 on IndieDB**, attracting international attention of over 100,000 views.
- Designed and implemented scalable, object-oriented features in Unity and C#.
 - Created an in-depth gridlike inventory system with containers synced over the network.
 - Designed and coded an advanced interaction system with 3D UI for in-game objects.
- Developed an authoritative multiplayer system with a custom packet serialization framework.
 - Set up dedicated servers to handle network traffic & verify data to prevent cheaters.

#3 - MIT Reality Hack (UNITY, C#, PYTHON) <https://devpost.com/software/project-x0bvzw8s654m>

- Won the **Best Use of Nreal Prize** for pushing the boundaries of media filtering in AR.
- Implemented image detection to accurately place virtual objects in real life.

SMapS - MHacks 12 (ANDROID, JAVA, NODE.JS) <https://devpost.com/software/smapps>

- Won **Lyft's Best Transportation Prize**, presenting a solution to increase the accessibility of Maps.
- Translated SMS messages to server web requests, providing Google Maps access without internet.
 - Created virtual phones on Twilio to act as SMS proxies for backend API.
- Created Node.js backend to handle incoming HTTP requests and invoke Google Maps API.

Machine Learning - AI Neural Networks (JAVA) <https://github.com/mast0rbill/machine-learning>

- Wrote neural networks from scratch to learn if a word comes from English, achieving 91% accuracy.

EDUCATION

University of Waterloo - Bachelor of Computer Science (CANDIDATE) SEP 2018 - APR 2023

- Cumulative Average (as of January 2021): 90%