# William Liu

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## SKILLS

- Highly experienced in **object-oriented programming** and **game development**:

| C# & Unity | Java & Android | C & C++ | Python | HTML/CSS |
|:---:|:---:|:---:|:---:|:---:|
| 5+ years | 5+ years | 2 years | Proficient | Proficient |

- Experience with functional languages, style, and paradigm, including Lisp.
- Worked extensively with **VR/AR**, including Hololens 2, Magic Leap One & Oculus Quest.

## EXPERIENCE

**Augmented Reality Developer**                                         APR 2019 - SEP 2019

**SPATIAL SYSTEMS INC. -** NEW YORK, NY                                  https://spatial.is

- Contributed to porting Spatial to **Oculus Quest** using Android Studio & Unity3D.
  - Created an Android WebRTC solution, enabling use of screenshare & webcam.
  - Implemented a native Android browser, allowing for live document editing.
  - Prototyped and developed features within 7-day deadlines.
- Worked on the Spatial **Magic Leap One** application using Unity3D and LuminSDK.
  - Designed and implemented object manipulation system suitable for ML controller.
- Developed the Spatial **Hololens** software, creating new user interfaces and fixing bugs.

**Software Lead**                                                       SEP 2015 - JUNE 2018

**5428 BREAKING BOTS -** MARKHAM, ON                          https://breakingbots.weebly.com

- Wrote camera relay software and input handling for remote-controlled robot in C++.
- Taught and supervised 11 members of the Software subteam.

## PROJECTS

**Paxitium** - **FULL-SCALE MULTIPLAYER SURVIVAL GAME**  https://www.indiedb.com/games/paxitium

- Led software development and created 3D art for the game using C# and Blender.
  - Contributed **~20000** lines of code and **400+** commits to the game repository.
- Contributions include fully authoritative multiplayer, in-depth inventory & in-game AI.
- The game reached **#1** on **IndieDB** in July 2017.

**Frog-go** - **MOBILE GAME**   https://play.google.com/store/apps/details?id=com.lutonstudios.froggo

- Developed an arcade mobile game for Android using Google AdMob API in Unity3D.

**Machine Learning -** **AI NEURAL NETWORKS**       https://github.com/mast0rbill/machine-learning

- Implemented language neural networks, improving to 91% accuracy via back-propagation.

## EDUCATION

**University of Waterloo** - **BACHELOR OF COMPUTER SCIENCE (CANDIDATE)**   SEP 2018 - MAY 2023

- Current student. Cumulative GPA (as of August 2019): 4.0/4.0