

# Jackie Yuan Jun Xu

2B Computer Science – University of Waterloo

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## Summary of Qualifications

- Experienced with the **Unity** game engine, its associated language **C#**, as well as working knowledge of game design and its development process
- Two years of accumulated experience with **Python** through URA research work and personal projects
- Familiar with a large breadth of assets including **Java**, **C**, **C++**, **SQL**, **Web** and **Android** app development

## Experience

### Game Programmer • *Behaviour Interactive (Montréal, QC)*

(Jan – Apr 2018)

- Front-end developer for the mobile game *Westworld* using **Unity** game engine, **C#** and **XML**
- Implemented new modular game components including scripts, assets, and prefabrications that are reusable and allow easy future expansions and modifications
- Optimized several inefficient game features including heavy memory allocation, reliance on update loops, and large data pulls using asynchronous loading and callback events
- Redesigned the way certain asset data is pulled for crucial game components by reading the data from an excel spreadsheet and removing the dependency on **over 100** scriptable object files
- Performed a complete code **refactor** on the game's Objectives system to **reduce 80%** of code clones
- Reported and fixed various bugs related to **UI**, **code** and **logic** including game-breaking issues

### Full Stack Developer/URA • *MyEffect/University of Waterloo (Kitchener, ON)*

(May – Dec 2017)

- Designed, implemented and tested new front-end and back-end features for the company's website using **HTML**, **CSS**, **AngularJS**, and **SQL** database
- Developed **Python** scripts to analyze data trends found in server logs from SQL databases and generated detailed graphs with **linear regression** models as a part of optimization for the SAP-SI research project
- Tested the current security infrastructure against malicious API requests. Discovered and patched a critical security authorization bug as a result
- Created detailed step-by-step guide for the company's platform using Markdown to help improve the codebase documentation. Includes explanation of frameworks, navigation and API usage
- Compiled multiple research reports on specifications of tools, data analysis and recommendations

## Projects and Activities

### RememberMeThis – *Android App • (March 2018 – Present)*

[View](#)

- Independently created an educational **Android app** that implements the Spaced Repetition learning technique to help students remember terminology in the most efficient way
- Implemented custom features including animations and file IO for handling persistent data

### Game Development Projects – *Python • (2016 – 2017)*

[View](#)

- Re-created modernized versions of classical games **Snake**, **Space Invaders**, **Pong** and **Tower Defense** with new additions using Python's Pygame library
- Integrated complex mechanics such as enemy tracking, AOE, map generation and path-finding

### PicFive – *Web App • UofTHacks IV (Jan 2017)*

[View](#)

- Cooperatively developed an image-word processing web game using the Clarifi API, which provides **image and natural language processing** abilities to recognize content in photos
- Developed the web user interface from scratch using **HTML**, **CSS** and **JavaScript** frameworks

### WatRGoose – *Android Game • MLH Local Hack Day (Dec 2016)*

[View](#)

- Published a fully functional, **Android** puzzle mini-game in 12 hours with a team of three