

Joseph Suh

3B - Computer Science | University of Waterloo

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SUMMARY OF QUALIFICATIONS

- Passionate about software tools and graphics programming as demonstrated by independent development of a simple OpenGL ES game engine
- Significant experience in C/C++ gained from taking several CS programming courses
- Proficient background in numerical computation, linear algebra and optimization
- Comfortable collaborating with cross-disciplinary teams on existing projects and code
- Six years' experience in developing programs on multiple platforms

EXPERIENCE

Software Engineering	IGNIS Innovation Inc.	01/2017 - 04/2017
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- Developed interest area analysis tools using C# and C++11 for panel monitoring software
- Investigated GPU optimization methods and implemented camera parallelization for an OpenCV application. As a result, application speed was increased by 20-30%
- Wrote code to automate the reprogramming of a stress testing application on timeouts

Android App Developer	North 60 Technologies	05/2016 - 08/2016
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- Implemented new weekly features for an existing large-scale mobile application using Android Studio and Swift tools
- Lead development of a Cordova and React based app from initial design to testing stages
- Presented research analyses of various cross-platform frameworks and designs. Proposals were well-received and influenced future app design decisions by the company

PROJECTS

WLP4 Compiler (Linux)	01/2016 - 04/2016
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- Developed a basic compiler in C++ for a small subset of the C language
- Gained experience writing components for the lexical analysis, semantic analysis and code generation stages of a compiler
- Became proficient in using STL libraries and debugging with GDB
- Wrote several low-level assembly programs and an assembler for the MIPS architecture

Chroma - Game (Android)	07/2014 - 09/2014
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- Independently developed the game using Java in an Android Studio environment
- Succeeded in building a simple custom game engine on top of the OpenGL ES 2.0 library
- Managed time effectively by organizing appointments with a graphic designer and ensuring there was consistent progress made on the game
- Attained 45+ five-star ratings and 500+ total installs

Link: <https://play.google.com/store/apps/details?id=com.jiracet.chroma>

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Chamber Crawler 3000 (Linux)

08/2015

- Created a mini 'rogue-like' game written in C++ using a Linux environment
- Implemented and tested procedural generation of randomized level patterns
- Applied software design patterns including MVC and visitor which resulted in greatly improved code organization and extensibility
- Effectively managed delegation of tasks with partner. As a result, very few conflicts occurred during the project's development

Recursive Tree Visualizer (Windows)

03/2015

- Implemented with the Unity game engine
- Motion visualization of a recursive tree with varying degrees, pivots and starting angles

Link: <https://github.com/Jiracet/RecursiveTree-Visualizer>

EDUCATION

Candidate for Bachelor of Computer Science

09/2014 – 04/2019 (expected)

Honours Computer Science, University of Waterloo, Waterloo, Ontario

Relevant Courses:

- CS 350: Operating Systems
- CS 341: Algorithms
- CS 486: Introduction to Artificial Intelligence
- CS 456: Computer Networks
- CS 370: Numerical Computation
- CS 246: Object-Oriented Software Development
- CS 241: Foundations of Sequential Programs
- CO 342: Introduction to Graph Theory

Awards:

- President's Scholarship of Distinction, University of Waterloo, 09/2014 -- Awarded to students with an admission average of 95% or higher

TECHNICAL SKILLS

Programming Languages:

C, C++, C#, Java, Bash, Python, JavaScript, MATLAB, Assembly (MIPS)

Software:

Git, Mercurial, Subversion, OpenGL ES 2.0, OpenGL 3.0, OpenTK, STL, GDB, Node.js, After Effects, Unity, Android Studio, Visual Studio, WPF