BRENNAN MALLECK

Web and Software Developer
Bachelor of Computer Science

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Skills Summary

- Over seven years of programming experience developed through course assignments and personal projects, as well as one solid year of full-time software development experience via co-op work terms.
- Abundant experience with object-oriented programming languages including Java and C/C++, dynamic languages such as Python and Lua, and web-development using JavaScript, HTML5, and CSS3.
- Additional experience with various database systems (SQL, Mongo), backend infrastructures (JBoss, NodeJS), testing frameworks (Jasmine, JUnit), and version control systems (SVN, Git).
- Strong personal desire to write code that is clean, concise, and efficient, by using the newest viable technologies and ensuring that programs are both well-written and well-documented.

Education

Bachelor of Computer Science, Honours Computer Science, Co-op Program,
University of Waterloo, Waterloo, Ontario **2010 to 2016**

Relevant Assignments:

RPC Binder, CS 454 - Distributed Systems **2015/05 to 2015/08**

- Worked alongside a classmate to create a remote procedure call binder - as well as extend existing server and client programs - using TCP/IP network communication methods.
- Implemented message serialization and deserialization for a set of communication protocols, as well as various scheduling and caching algorithms.

Mine488, CS 488 - Introduction to Computer Graphics **2015/05 to 2015/08**

- Created a basic interactive voxel engine written in Javascript using WebGL/Canvas, during a two week time frame as a final project.
- Includes movement and camera view, basic physics engine with limited collision, gravity and friction, as well as basic procedural world generation.

Relevant Courses: Algorithms (CS 341), Operating Systems (CS 350), Introduction to Database Management (CS 348), User Interfaces (CS 349), Introduction to Computer Graphics (CS 488), Distributed Systems (CS 454), Computer Networks (CS 456), Computer Security Privacy (CS 458), Database Systems Implementation (CS 448), Introduction to Artificial Intelligence (CS 486)

Work Experience

Software Developer, Agfa Healthcare, Waterloo, Ontario **2015/01 to 2015/04**

- Worked as a fully-fledged member of a software development team in an agile/scrum enterprise environment, with regular team and company meetings.
- Regularly submitted, reviewed, and took part in a variety of peer-to-peer code reviews, specifically those of my own contributions.
- Majority of development involved work on a large backend data center infrastructure, based on Java and JBoss server technologies.

Web Developer, Gateway iQ, Cambridge, Ontario **2013/09 to 2013/12**

- Strengthened teamwork and pair-programming skills through daily work alongside another student on a large and complex production web application.
- Sharpened troubleshooting skills by debugging and fixing a vast quantity of bugs inside a large web application with many features.
- Practiced both general and team-based SCM concepts through the use of a custom SVN system and a rigorous upload procedure (local development, live testing, and live production).
- Developed a sense of customer relations by communicating with clients and understanding their needs.

Web Developer, Agfa Healthcare, Waterloo, Ontario **2013/01 to 2013/04**

- Researched and implemented live demos for various public technologies, including JBoss (Java-based application server infrastructure), NodeJS (JavaScript-based server), JQuery (JavaScript utility library), Bootstrap (layout/design, mobile), LESS (CSS shorthand), BackboneJS (MVC framework), RequireJS (module loader), and other smaller libraries.
- Verified usability and cross-browser compatibility by utilizing both frontend and backend testing technologies, including Jasmine (JavaScript front-end), JUnit (Java backend), and Selenium (automated test-cases mimicking real user input).
- Independently designed and developed a file management widget as a mini-application to be implemented into a large industry-standard product.

Activities and Interests

- Working on personal projects such as my personal website (always a work-in-progress), an extensive data-driven procedural generation engine, and a large Python abstraction library for modelling various objects and operations associated with a popular video game.
- Researching and prototyping a wide range of topics including game development, server-client architectures, modular API design, procedural generation algorithms, graphics optimization, emergent AI, and software development best-practices.
- Non-programming interests include occasional travelling, casual gaming, and - most of all - spending time with my wife and son.