Shane Hickman

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Summary of Qualifications and Relevant Skills

- Experienced In: Java, Spring, JPA, C, C++, C#, MySQL, PHP, JavaScript, HTML, CSS
- Tools: Git, AWS, Gradle, JUnit, Mockito, Docker, Ansible, Jasmine, IntelliJ, Datadog, Loggly, JIRA
- 4 years of experience creating, modifying, and troubleshooting Java standalone, and web applications
- Quickly able to pick up new languages and technologies with minimal guidance
- Strong UNIX Shell skills developed building, deploying, and remotely editing Java web applications
- Comfortable following and introducing test driven development strategies

Employment Experience

Software Developer (Co-op)   Kitchener, ON   May 1st – Aug 25th 2017
Miovision Technologies Incorporated
- Independently wrote a performant and self-contained library for constructing and publishing large amounts of data to train neural networks (through AWS).
- Implemented a major workflow refactoring to pave the way for future cost savings initiatives.
- Wrote and maintained POJOs to facilitate json data transfer to and from computer vison software.
- Introduced Datadog metrics gathering to satellite servers to monitor download speeds and cache performance.
- Maintained communications across teams to help integrate new computer vision software into the workflow.

Golf Course Maintenance Worker   Vineland, ON   Apr - Nov 2015 and Apr – Sep 2016
Twenty Valley Golf and Country Club
- Confident following instructions, worked diligently to finish jobs and resolve problems as they arose.

Programming Projects

2D procedural side-scroller using Unity Game Engine (C#, NUnit, Git)   2017
- Wrote a dynamic and scalable node based pathfinding algorithm capable of supporting hundreds of navigation agents at a time without performance loss.
- Created performant integer set data structures as a powerful base for bounded random generation.

Process manager "Lens" terminal emulator, process launcher, and script runner (Java(FX), Gradle, Git)   2017
- Wrote custom yaml user config parsers and providers for easily defining custom commands.
- Modified and embedded open source JetBrains terminal emulator JediTerm into the core application.
- Created a command framework for executing various local processes through a terminal "like" prompt.

(School) Library for parallel computing across multiple connected "Arduino like" boards (C, SVN)   2016
- Created a data structure for storing functions to implement lambda and anonymous "like" functions in C
- Wrote algorithm to parse and execute functions from strings passed through serial communication.

Website (www.photesto.space) created from scratch to serve as a database for the sharing and posting of study resources (PHP, Java, HTML, CSS, JavaScript and jQuery, MySQL, Ajax)   2015 and 2016
- Created login system with encryption and email verification to protect user data
- Implemented self-made lossy image compression algorithms in both php and java
- Styled website responsively for optimal performance on both desktop and mobile devices

3D survival game "Feral Lands" using Unity Game Engine (C#, Javascript)   2014 and 2015
- Created rich and intuitive user interface to support game mechanics

2D top down game "Posdusk" from scratch using Java Swing (Java)   2014
- Modified A* pathfinding algorithm to navigate through segmented 2D collision detection arrays

Emergency assist robot using Basic Stamp micro-controller (PBasic)   2011 and 2012
- Programmed wireless control and sensor feedback functionality for robot

Awards and Accomplishments

Schulich Leader Nominee   National   2016
One of 1500 grade 12 students chosen from across Canada to compete for 50 Schulich Leader Scholarships

Waterloo Math Contest; CSMC School Champion; Euclid Math Contest 2014, 2015 and 2016
Consistently achieved highest marks for all math contests written at E.L.Crossley Secondary
Regional ECOO Programming Competition   Niagara   April 2014, 2015 and 2016
Consistent team participant, second place winner in grades 10 and 12, third place winner in grade 11

Canada Wide Science Fair   Charlottetown, PEI   May 2012
Gold Medal Winner, Junior Innovation Award Winner, Western University Scholarship Winner

Volunteer Experience

Tutor   Fonthill, ON   Fall 2014 – June 2016
E.L.Crossley Secondary School Guidance Department
- tutored grade 9, 10, 11 and 12 students in math, science and computer science courses

Camp Volunteer   Brock University, St. Catharines, ON July 2012 and 2013
Youth University & Niagara Regional Science and Engineering Outreach Youth Development Camps
- collaborated with camp directors in presenting programs; mentored and encouraged camp participants

Education

Candidate for Software Engineering (BSE) Degree Waterloo, ON   start date: September 2016
University of Waterloo class of 2021
Semester 1 & 2 GPA of 4.0
Ontario Secondary School Graduation Diploma Fonthill, ON   June 2016
E.L.Crossley Secondary School
98.5% overall average for grades 11 and 12