Nathan Jaremko

Summary of Skills

- Excellent communcation skills; Listening; Responsibility; Assertiveness; Self-Management;
- C; Java; Go; Ruby; Python; Elixir; Swift; C#; C++; SQL; JavaScript;

Employment Experience

QA Analyst **PointClickCare** **August 2015 – April 2016**

- Discovered a security vulnerability that allowed javascript to be executed from text boxes in the application, and reported it to the team lead. A fix was released in the next emergency patch.
- Participated in a "hackathon" event to design and implement unit tests for components of the application resulting in less bugs being created during a major refactor.
- Performed regression, backward compatibility, functional, and integration testing resulting in many bugs being discovered and patched.
- Participated in daily scrum stand up meetings, as well as weekly backlog grooming and sprint planning sessions.

Game Development Intern **S.S.M. Innovation Centre** **June – August 2012**

- Contributed as the only software developer on the team to meet and exceed project deadlines demonstrating strong organizational skills.
- Designed a competitive race game in the Unity3D game engine using C# and JavaScript to implement AI, movement, level generation, animation, and physics
- Extended engine systems in C++ to support A* pathfinding using the Manhattan distance heuristic and creating dynamic navigation maps using ray casting
- Wrote unit tests, and tested product regularly to ensure quality of development
- Strengthened communication skills by interacting with team members, project manager, and supervisors

Education

Toronto, ON **University of Toronto** **Fall 2014 – Present**

Candidate, Bachelor of Science

- Computer Science Co-op Specialist in Software Engineering, May 2018.

Technical Experience

Projects

- **Goray** (2016). Open-Source concurrent ray tracer implemented in go. It currently supports directional lighting of triangles, meshes, planes, and spheres. Intersection testing is accelerated by an efficient implementation of bounding kd-trees. Parsing of .OBJ files is supported, with .3ds file support in progress. Diffuse lighting is implemented with support for reflection, refraction, and transparency. Golang
- **Website experience project** (2016). An open source example site that supports user creation with encrypted and salted passwords stored in a postgres database. It also supports encrypted session cookies, and testing for user sessions on page load. Golang
- **Knuth text algorithms** (2016). Open-Source golang library implementation of the Knuth-Plass line breaking algorithm, and the Knuth-Liang hyphenation algorithm. Golang
- **Python SQL-like querying** (2015). Created a database querying program with the ability to search and retrieve data, as well as produce Cartesian products of tables. Functionality mimicked SQL with the use of SELECT, FROM, and WHERE tokens. Python
- **Regex permutations** (2015). Created a program that returned a list of all permutations of a string that were valid regular expressions, and represented them as a tree. Recursively implemented a function that checked if an inputted string matched a given regular expression. Python