NICHOLAS MANNA

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3A – MECHATRONICS ENGINEERING

Self-motivated engineering student, driven by a desire to learn new skills and technology. Capable of working independently, adapting to new environments and generating valuable contributions.

SKILL SUMMARY:

- Strong scripting proficiency using Python, BASH & Perl.
- Working knowledge of programming in C++ (with Qt), C & Java.
- Practiced in programming Unix/Linux Systems, Embedded Systems, Android Applications and full-stack web development.
- Experienced working in a large software enterprise and in a start-up company environment.
- Strong interpersonal skills, including verbal and written communication.
- Hands-on experience with Arduino, FPGA, PIC, AVR and Launchpad platforms.
- Python Frameworks/Libraries of Choice: Gevent, Twisted, Flask, NumPy, PySide, PyGame

WORK EXPERIENCE:

Software Designer, Evertz Microsystem, Burlington, Ontario, Canada (*January-May 2015*)

- Creation and Development of VirtualLab, a framework used for virtualizing tools, testing environments and Evertz products heavily based on using KVM as a hypervisor. VirtualLab is capable of spawning and configuring a large number of Virtual Machines in a short amount of time and allows for custom scripting plugins for each target VM configuration.
- Continuation of work on platform and application aspects on the DreamCatcher product from previous co-op.
- Proposed new features intended to benefit specific clients.
- Co-ordinated a demo involving multiple developers and teams to showcase VirtualLab platform.

Software Designer, Evertz Microsystem, Burlington, Ontario, Canada (*May-September 2014*)

- Worked on both the application and platform side of Evertz's DreamCatcher product, implementing new features and fixing existing bugs. Heavy emphasis on underlying Linux OS and Python control application.
- Improved build times from 30 minutes to 2 minutes through the use of various retentive caching approached to eliminate unnecessary processes.
- Creation of DreamCatcher Virtual Machine image. Making it possible to recreate client setups locally and providing developers a sandbox for experimentation.

Software Developer, Autodesk, Montreal, Quebec, Canada, (*September-December 2013*)

- Worked on developing a solution for Continuous Integration, Daily Integration and Preflight automated building that could be scaled and applied to all Multimedia and Entertainment products of Autodesk Inc.
- Established various procedures and processes within ElectricCommander that were implemented into production.
- Employed the use of various scripting techniques to overcome limitations and shortcomings of ElectricCommander.

Programmer/Developer, ExoU Incorporated, Montreal, Quebec, Canada, (*February-May 2013*)

- Created application for automating quality assurance testing as well as a web API and user interface for managing tests on database and posting test results.
- Implemented Continuous Integration with Jenkins and wrote build scripts for Windows, Linux, Mac, Android and iOS.
- Detected and fixed various application specific and "EXO-Engine" bugs.
- Established, optimized and performed various QA procedures.

EDUCATION:

Candidate for Bachelors of Mechatronics Engineering, Co-operative program, University of Waterloo, Waterloo, ON (September 2012 – present)

- Past Involvement with Waterloo Forumla Electric Team.
- Participated in multiple Waterloo Engineering Competitions, with a win of the Fall 2014 competition.
- Held director position for Waterloo Engineering Competition (Software Division). With responsibilities including organising event, deciding on the problem statement, developing the simulator used for the completion.

ACTIVITIES AND INTERESTS:

- Working on personal projects, with an emphasis on experimenting with new technology as opposed to actual completion.
- Blogging about interests and showcasing side projects at nmanna.com
- Guitar Modifications
- Robotics
- DJ-ing
- Amateur Video Game Development
- Surfing, Rock Climbing, Pool & Table Tennis