Amin Bandali

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Education

2014 – 2017   **York University**, Canada

B.Sc., Hons. Computer Science
GPA: 7.9/9.0

Relevant coursework: Computational Complexity, Artificial Intelligence & Logic Programming, System Specification & Refinement, Operating System Design, Design & Analysis of Algorithms.

Skills

Programming Languages: Python, Haskell, C, C#, Rust, C++, Java, JavaScript

Tools: Emacs, Git, Mercurial, Zsh, CI Systems (e.g. Travis CI), Rodin, SQL DBs

Platforms: Arch Linux, Ubuntu and other distros, Android, macOS, Windows

Experience

summer 2016   **Research Student**, Software Engineering Lab, York University

Semester project: As an undergraduate research student, I worked on **Literate Unit-B**, the verifier for Unit-B, a new formal method focused on formal verification of reactive, concurrent and distributed systems.

From the Literate Unit-B codebase (written in Haskell), I decoupled the logic module and used it to build **Unit-B Web**, a web interface using Literate Unit-B to do predicate calculus proofs. Unit-B Web, also written in Haskell, supports the LaTeX syntax of the Unit-B logic, renders user input on the page, and calls the sequent prover of the logic module, which uses the Z3 SMT solver to check the validity of user input.

Volunteer work: I'm currently working on implementing subtyping for Literate Unit-B.

2015 – 2016   **Software Developer**, Lotek Wireless Inc.

Designed and implemented various applications in **C#** and **C** to test and analyze a **satellite pass prediction** algorithm for predicting the pass windows of **Argos** satellites, for scheduling send times of data collected by company's wildlife tracking products.

Designed and developed an **Employee Portal** web application in **C#** and the **MVC** framework, used by employees for accessing various data catalogs and archives.

summer 2015   **Organizer**, EmacsConf 2015

Key organizer and in charge of setting up several vital pieces of the EmacsConf infrastructure.

2013 – 2014   **Software Developer**, Athlete Builder

Helped this early stage startup bring video learning product to market. Programming in **C#** and using **MVC** framework on a Windows stack, I developed the **backend** of the Athlete Builder platform and had key role in development of the platform core. I also wrote the alpha version of the Athlete Builder **Android** app in **Java**.

spring 2013 **Application Developer**, VONICAL Inc.

As a volunteer, worked on development of EARN (Employment Accessibility Resource Network) portal using Anahita social networking platform, in **PHP** under Linux.

winter 2013 **Mobile & Web Developer**, Hire Works Inc.

As a volunteer, worked on a variety of web and mobile projects for Hire Works, Inc.

summer 2012 **Web Developer**, St. Brigid's Summer Camp

As a volunteer, I re-designed and coded (from scratch) an updated and revamped version of the photo gallery section of STB's website in PHP and JavaScript. A refactored version of my code is deployed and being used.

Research Interests

Programming languages, type systems, and formal methods.

Last updated: October 21, 2016