Michael G. McGirr

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EDUCATION

Master of Science, Computer Science
Oregon State University
(In Progress)

Graduate School of Electrical Engineering & Computer Science
2015 September - present
Research Area: Programming Languages. Functional Programming.
Domain-specific languages. Affine and Linear Types.
Directory: http://eecs.oregonstate.edu/people/McGirr-Michael
OSU Webpage: http://web.engr.oregonstate.edu/~mcgirrm/

Bachelor of Science, Computer Science
University of Oregon

2011 September - 2015 June

(Summer Session) London School of Economics, UK

2011 June - 2011 September

University of St Andrews, Scotland, UK

2009 September - 2011 June

PROGRAMMING AREAS

Main language: Haskell and Haskell-like languages (Purescript)
Other languages: Idris, Rust, Arduino C, Python, ZSH/BASH
Server/Database: NGINX and Keter, Yesod/Wai for Haskell, PostgreSQL, RESTful API's
Markup : HTML, CSS, XML (mostly from Android), & LaTeX
Operating Systems: Unix-like operating systems like Linux. I'm particularly familiar with Arch Linux and Debian.

EXPERIENCE & WORK

Graduate Teaching Assistant for the following courses: September 2015 - present
School of Electrical Engineering and Computer Science - College of Engineering at Oregon State University
- **CS 391** - Fall 2015
- **CS 381 Programming Language Fundamentals** - Winter 2016, Winter 2017, and Spring 2017
- **CS 581: Programming Languages I** - Fall 2016
    - Topics covered functional programming in Haskell, abstract and concrete syntax, denotational semantics, domain theory, interpreters, lambda calculus and Church encodings.

Server-Side Haskell Programmer   July 2015 - present
TurnKey - A real estate startup - main product is an Android application (in development).

- Author of the server-side Haskell code for the RESTful connection from the client app to the PostgreSQL database as well as the resource files stored on Amazon S3.
- In charge of designing the database and running the API server on a Debian EC2 instance.

Android Application Developer   Spring 2013 - Spring 2015
Global Nutrition Empowerment, Nepal project in micronutrient sustainability.
Overall, the project has taken 70 to 110 hours at a conservative estimate.
A collaborative effort between USAID, the WHO and the GNE charity - for whom I volunteered.

- As an intern for the charity, I wrote an Android application that spoke to the user in Nepali and explained to them the importance of micronutrients and good nutrition. The intent was to reduce preventable birth defects with proper nutrition for the mother.
- The app also featured some interactive questions for the user. A major requirement of the application was that it could be used by an illiterate user.

Research Assistant and Web Scraper   Winter 2013 - June 2015
Economics Department, University of Oregon
Hours on a per project basis - a project might take 20 hours.

- Scraped considerable amounts of data from the web for use in research by an economics professor at the University of Oregon using a modified version of the python based tool Scrapy.

Undergraduate Grader for CIS 314, Computer Organization   September 2014 - March 2015
Computer Science Department, University of Oregon, 20 hours per week

- Graded two terms for Professor Eric Wills.
- Course covered computer organization and instruction-set architecture - digital logic design, binary arithmetic, design of central processing unit and memory, machine-level programming.