

Michael G. McGirr

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EDUCATION

Master of Science, Computer Science
Oregon State University

2015 September - 2018 March

Advisor: Eric Walkingshaw <eric.walkingshaw@oregonstate.edu>

Research Areas: Programming Languages. Functional Programming. Domain-specific Languages. Concurrency in Haskell. Affine and Linear Types.

Directory: <http://eecs.oregonstate.edu/people/McGirr-Michael>

OSU Webpage: <http://web.engr.oregonstate.edu/~mcgirr/>

Bachelor of Science, Computer Science
University of Oregon

2011 September - 2015 June

PROGRAMMING AREAS

Main language: Haskell and Haskell-like languages (Purescript)

Other languages: Idris, Rust, ZSH/BASH

Server/Database: AWS, NGINX and Keter, Yesod/Wai for Haskell, PostgreSQL, RESTful API's

Operating Systems: Unix-like operating systems. I'm particularly familiar with Arch Linux, Debian, and NixOS.

EXPERIENCE & WORK

Graduate Teaching Assistant for the following courses:

September 2015 - December 2017

School of Electrical Engineering and Computer Science - College of Engineering at Oregon State University

- **CS 381 Programming Language Fundamentals** - Winter 2016, Winter 2017, and Spring 2017
- **CS 581: Programming Languages I** - Fall 2016 and Fall 2017

– Topics covered functional programming in Haskell, abstract and concrete syntax, denotational semantics, domain theory, interpreters, lambda calculus and Church encodings.

Web App Developer

November 2017 - present

TurnKey - A real estate startup.

- Developing the Purescript (Halogen) based Web Application.

Server-Side Haskell Programmer

July 2015 - July 2017

TurnKey - A real estate startup - main product is an Android application (in development).

- Author of the initial server-side Haskell code for the RESTful API. The API server handled communication between the client-side applications and a PostgreSQL database running on an Amazon EC2 instance.

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.

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.