Miles McCall

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Core Competencies

Language Experience: C, C++, Python, Perl, R, CUDA, PHP, HTML, SQL, Bash

Platforms: Git, POWER8, x86, Linux, Mac, Windows, Android, iOS, server-class environments, cloud environments, large scale clusters

Technical Skills & Interests: high-throughput data, low-latency data processing, networking, DBMS, AI, machine leaning, web development

Education

• *Oregon State University* — Corvallis, OR
BS Computer Science — Focus: Bioinformatics — September, 2014 - August, 2018

Relevant coursework:
Computer Science: advanced programming languages, computer architecture, digital logic, algorithms & theory of computing, software testing
Biology: oceanography, biological networks, genomics, genetics, ecology, marine ecology

Relevant Experience

• *Undergraduate Research Assistant* - HMSC Cowen Lab — Newport, OR March, 2015 - Present
Designed, tuned, and currently support multiple software packages involved in imagery data processing. Responsible for managing large-scale data sets (hundreds of TB's), and maintaining long term, high throughput data processing. Developed a software pipeline incorporating Bash, Python, R, C++, Perl, CUDA, SQL, Postgres, and a web front-end. Worked closely with graduate, doctorate, and post-doc researchers to create custom scripts and functionality specific to the research being done.

• *Website Project* - Web Development — Corvallis, OR Winter 2016
Worked in a team of five for a term to develop a music sharing website. Users were able to log in to the site to upload their favorite songs to pages for specific genres. It featured an interactive graphical interface to display content and navigate the site. Built from scratch, the project included: javascript, css, html, php, file uploads and file management, multi-user systems, and web security.

• *Senior Design Project* - OSU Personal Robotics Lab — Corvallis, OR September, 2017 - Present
Deep Learning For Object Recognition on a Mobile Robot
Utilized Fetch hardware and ROS software, neural networks, GPU processing, and image processing algorithms to create an intelligent agent capable of identifying individual instances of different object classes. Researched the viability of several experimental technologies, such as Intel Movidius compute sticks. Took advantage of sequential online learning to improve image classification, allowing for new data to be dynamically added to the robot's knowledge base. Met frequently with client to manage project progress and ensure satisfaction in final product. Managed a year long project with collaborative programming, version control, specific responsibilities and expertise. Presented at the 2018 OSU Engineering Expo.

• *Usability Project* - Introduction to Usability Engineering — Corvallis, OR Spring 2017
Worked in a team of three to create a prototype of the Oregon State employee website focusing on intuitive and user-friendly features. We collaborated in gathering input through surveys and interviewing users, worked to make more inclusive software, and went through a multiple version development process to add revisions with novel insight.

Hobbies & Other Experience

Hobbies: biking, mixed martial arts, weight lifting, rock climbing, gardening, card games, cooking

Volunteer Activities: summer camp counselor: 2008 - 2012