

Philip Robinson

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<https://github.com/probinso>

Personal Statement

I am currently a masters student at OHSU, studying computer science with projects in image, signal, and text processing. In my several years of industry experience and prior degree, I developed strong interests in scientific computing, information retrieval, machine learning, programming languages, reproducible research, and education. I have adapted to, and adopted, a new tool-set in nearly every challenge I have taken on. I am hoping to help you understand, and better yet solve, interesting and valuable problems.

Persistent Experience :

Python	C, C++	Linux	TDD
R, dplyr	TeX	Git	Ticketing Systems

Work Experience

NASA Jet Propulsion Lab - Graduate Research Intern June 2018 - Sept. 2018

Designed & developed Expert Modeling/Recommender System, by extending the Author-Topic-Model
Prototyped matching experts against mission critical anomalies, automating expensive tasks
Implemented stable/principled text normalization, tokenization, and model evaluation
Open Source contributions to the gensim's natural language processing library

Technologies : Python, gensim, pyLDAvis, pandas, jupyter

OHSU Fair Neuroimaging Lab - Research Assistant Oct. 2017 - June 2018

Contributed to workflows and analytics tools for studying Microbiome populations
Supported research on developing brains, including ABCD, and several ADHD/ASD studies
Developed processing pipeline and audit tools for reported data and fMRI images

Technologies : Python, Bash, R, neo4j, ponyorm, stan, GitLab

Contractor/Consultant

RGB Optics / C&W Energy USA Nov. 2015 - Present

Developed low cost spectral profile analysis and custom photo image processing
Authored educational material in light pollution's effect on economy, biology, and technology
Developed a cloud memoizing data pipeline for caching computationally expensive operations
Provided live technology tutorials and consulting on optimization and image processing

ComScore June 2016 - Sept. 2016

Worked to support large, custom, memory mapped, data store for demographic analysis

PDXCodeGuild June 2016

Developed and taught introductory python course material for coding boot-camp

Melinae March 2016

Setup infrastructure in AWS to enable secure sustainable remote-first workflow
Provided hands on training in Python and R to industry professionals

Technologies : Python, numpy, skimage, R, AWS, PostgreSQL, Perl, C++, Jira, ZenHub

Galois Inc. - Research Engineer April 2014 - Dec 2015

Contributed to PPAML, Overseas Voting Foundation, Safeware
Developed processing pipelines and workflows to enable evaluator work for DARPA programs
Produced biannual quantitative and qualitative reports on for DARPA and language developers
Participated in programs sharing new technologies to research and industry professionals

Technologies : Python, SLURM, Scala, Figaro, Chimp, Docker, Jira, Basecamp

EMC² Isilon Storage - Software Development Engineer Dec. 2012 - July 2013

Brought to schedule a lagging anchor release feature in approximately 5 months
Designed and developed password manager to support Data At Rest Encryption
Wrote unit tests using libcheck to attain > 80% code coverage

Technologies : C, C++, Python, SQLite, Subversion, FreeBSD, OpenSSL

Computer Science Dept. - Mentors Program Director Sept. 2009 - March 2012

Provided safe environment for training and instruction of students and mentors
Wrote comprehensive quarterly reports, and tools for automatic report generation

Technologies : Ada, C++, Scheme, R, mercurial

Neato Projects

Topic modeling and applications, for non-statisticians	TeX
Whale vocals localization and analysis	<i>scipy, Python</i>
Workshop collaborative introduction to GitHub and slides	<i>markdown, bash, github.api</i>
Morphological Watershedding Algorithms	<i>pyspark, numpy, ndimage, Python</i>
Relevance Vector Machine	<i>Julia</i>
Information Retrieval Cluster/Rank Demo Harness	<i>flask, numpy, nltk, sklearn, Python</i>
Gene Data Breast Cancer Drug Predictor	<i>R, caret</i>
Distributed Fully Homomorphic Encryption System	<i>Hadoop, Sagemath</i>
Concurrent Elliptic Curve Cryptography Module	<i>Sagemath, Erlang</i>
Multilingual Analysis of Subordinating and Coordinating Conjunctions	<i>R, Perl</i>
AdaRailz Concurrent Model Train Control System	<i>Ada</i>
Fractal Art Generator	<i>C#</i>
Image Manipulation Program	<i>C#</i>
Unix Shell	<i>C</i>
Liars Dice Game Server	<i>C</i>

Education

Oregon Health Science University

CSLU

Computer Science MSc
2016 - present

Courses :

★ Deep Learning	Information Retrieval
★ Artificial Intelligence	Computing Ethics
Digital Signal Processing	Statistical Methods
Problem Solving with Large Clusters	Univariate Statistical Analysis
Image Processing	Analysis of Sequences
Machine Learning	

Western Washington University

Computer Science

Computer Science BS, Mathematics Minor
Sept. 2007 - June 2012

Electives :

Homomorphic Encryption Systems	Computer Graphics
Cryptography & Elliptic Curves	Number Theory
Artificial Intelligence	Elementary Real Analysis
Natural Language Processing	Abstract Algebra
Functional Programming	Linear Algebra I/II