

**Philip Robinson**

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<https://github.com/probinso>

## Personal Statement

I am currently a masters student at Oregon Health and Sciences University's Center for Speech Learning and Understanding, studying computer science with a focus in signal processing and machine learning. From my 5 years industry experience and BS at Western Washington University, I developed strong interests in cryptography, reproducible research, statistical computing, and programming languages. I have adapted to, and adopted a new or tool-set in nearly every challenge I have taken on. My interest in teaching and writing has also gained me strong communication skills.

## Language Experience :

★ Python	Julia	C, C++	ET <sub>X</sub>
Ada	R	Perl	

## Education

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### Oregon Health Science University

CSLU

Computer Science MSc  
2016 - present

#### Courses :

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

### 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

### NASA Jet Propulsion Lab - Research Fellow

July 2018 - Sept. 2018

Information retrieval on automatic identification of Subject Matter Experts

### OHSU Fair Neuroimaging Lab - Data Engineer

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  
Project management guidelines, Git Czar, Team Security Representative

Languages Used : Python, Bash, R, stan, neo4j, ponyorm

### Contractor/Consultant

#### RGB Optics / C&W Energy USA

Nov. 2015 - Present

Provided live technology tutorials and consulting on optimization and image processing  
Authored educational material in light pollution on economy, biology, and technology  
Light classification engine, custom photo image processing tools, and mathematical models  
Developed a cloud memoizing data pipeline for caching computationally expensive operations

#### 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

Languages Used : Python, R, AWS, PostgreSQL, Perl, C++

**Galois Inc.** - **Research Engineer** **April 2014 - Dec 2015**

Contributed to PPAML, Overseas Voting Foundation, Safeware, Robot Fast Track  
Developed technologies 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

Languages Used : Python, Scala, Figaro, Chimp, Docker

**EMC<sup>2</sup> 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

Languages Used : C, C++, Python, SQLite

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

Provided safe environment for training and instruction of students and mentors  
Ran student/faculty meetings to project future program responsibilities  
Wrote comprehensive quarterly reports, and tools for automatic report generation

Languages Used : Ada, C++, Scheme, R

## Neato Projects

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Whale vocoder and species identifier	Python
Sensor Systems and Light Pollution Analysis	aws, sklearn, skimage, PonyORM, Python
Morphological Watershedding Algorithms	numpy, ndimage, Python
Relevance Vector Machine	Julia
Information Retrieval Cluster/Rank Demo Harness	flask, sklearn, Python
N-Body Simulator	SIUnits, Julia
Splinqr - Shamir Secret QR Sharing	Python
Probabilistic-Program Profiler and Evaluator Harness	SLURM, PonyORM, Python
Distributed Fully Homomorphic Encryption System	Hadoop, Python
Concurrent Elliptic Curve Cryptography Module	Sagemath, Erlang
Multilingual Analysis of Subordinating and Coordinating Conjunctions	R, Perl
AdaRailz Concurrent Model Train Control System	Ada
Fractal Art Generator & Image Manipulation Program	C#
Unix Shell	C