

**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 several years industry experience and degree from 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

June 2018 - Sept. 2018

IR system for Subject Matter Expert Identification by Topic and Author modeling system

### OHSU Fair Neuroimaging Lab - Research 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  
Established project development guidelines, Git Czar, Lab Security Representative  
Worked in teams under multiple institutional review boards

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

### 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**

**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 vocals localization and analysis

*Python*

Sensor Systems and Light Pollution Analysis

*aws, sklearn, skimage, PonyORM, Python*

Morphological Watershed 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*