# Philip Robinson

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**https://github.com/probinso**


## Personal Statement

I am currently a masters student at OHSU, studying computer science with a focus in signal processing and machine learning. In my several years of industry experience and prior degree, 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++ | LaTeX |
| Ada | R | Perl | |

# Work Experience

**NASA Jet Propulsion Lab** — **Graduate Summer Research Intern** — **June 2018 – Sept. 2018**

Developing automatic Subject Matter Expert identification against failure report system
Implemented principled text normalization, tokenization, and model evaluation strategies
Open Source contributions to the gensim's natural language processing library

**Languages Used : Python, gensim, pandas, jupyter, pyLDAvis**

**OHSU Fair Neuroimaging Lab** — **Research Support 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

**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
Light classification engine, custom photo image processing tools, and mathematical models
Developed a cloud memoizing data pipeline for caching computationally expensive operations
Provided hands on training to grow industry scientists in Python

**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, Chimpy, Docker**

**EMC$^2$ 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
Wrote comprehensive quarterly reports, and tools for automatic report generation

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

# Neato Projects

| | |
|---|---|
| Whale vocals localization and analysis | ***jupyter, matplotlib, scipy, 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*** |
| Gene Data Breast Cancer Drug Predictor | ***R, caret*** |
| N-Body Simulator | ***SIUnits, Julia*** |
| 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*** |
| Liars Dice Game Server | ***C*** |

# Education

### Oregon Health Science University — CSLU

Computer Science MSc
2016 - present

**Courses :**

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

### Western Washington University — Computer Science

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