

Philip Robinson

Portland, OR 97214

probinso+res@protonmail.com
206.377.9747

<https://github.com/probinso>

Personal Statement

I have 7+ years experience, solving increasingly difficult problems with software. My diverse work history spans both products and research, including data pipelines/management, medical informatics, programming languages, and computer securities. My graduate studies focused on applications of machine learning in audio, image, and text processing. I have developed strong interests in data analysis/exploration, information retrieval, data engineering, and machine learning.

Persistent Experience :

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

Work Experience

Graduate Research with ACO - Machine Learning in Marine Acoustics (continuing)

Researched deep unsupervised anomaly detectors, for sane indexing of 10 year audio track
Developed ACOio, an intuitive ACO track explorer, to rejuvenate data access for researchers
Developed principled audio processing and noise-suppression, focused on marine bioacoustics

Technologies : Python, ACOio, tensorflow, scipy.signal, Jupyter

HappyWhale - Staff Engineer March 2019 - present

Thinkful (Part Time) - Data Science Technical Expert Jan. 2019 - present

Advised career transitioners in mastery of professional and data science topics
Provided safe environment for training and instruction in a remote-first setting

NASA Jet Propulsion Lab - Graduate Data Science Intern June 2018 - Sept. 2018

Fully specified programmatic solution from use-case meetings with top NASA/JPL employees
Designed & developed Expert Modeling/Recommender System, by extending the Author-Topic-Model
Implemented stable/principled text normalization, tokenization, and model evaluation
Open Source contributions to the gensim's natural language processing library

Technologies : Python, nltk, gensim, pyLDavis, pandas, Jupyter

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

Contributed to microbiome population analytics tools, to study female reproductive system
Developed processing pipeline and audit tools for reported data and FMRI, on ADHD/ASD studies
Acted as standards and Open Source release lead, developing and enforcing best practices

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

RGB Optics (Part Time) - Contractor Nov. 2015 - Aug. 2018

Developed custom photo image processing tools for low cost spectral profile analysis
Authored educational material in light pollution's effect on economy, biology, and technology
Provided live technology tutorials and consulting on optimization and image processing

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, Robot Fast Track
Developed processing pipelines and workflows to enable evaluator work for DARPA programs
Produced biannual quantitative and qualitative reports on for DARPA and language developers

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

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

Designed and developed password manager to supporting self encrypting drives in FreeBSD
Brought to schedule a lagging anchor release feature in approximately 5 months
Participated in threat modeling for multiple security sensitive applications

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

Neato Projects

Multiple Myeloma Clinical Trials, custom named-entity boosted topic model	<i>numpy, Python</i>
Topic modeling and applications, a presentation for non-statisticians	<i>beamer, TeX</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>

Education

Oregon Health Science University

CSLU

Computer Science MSc
2016 - present

Courses :

- | | |
|---------------------------------------|--|
| ★ Advanced Topics in Machine Learning | ★ Natural Language Processing |
| Deep Learning | ★ Advanced Topics in Signal Processing |
| Machine Learning | Speech Signal Processing |
| Artificial Intelligence | Problem Solving with Large Clusters |
| Statistical Methods | Image Processing |
| Univariate Statistical Analysis | Information Retrieval |
| Analysis of Sequences | Computing Ethics |

Western Washington University

Computer Science

Computer Science BS, Mathematics Minor
June 2012

Electives :

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