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	LaTeX	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 Software Engineer** March 2019 – present
  Developed SciDir, a cross platform application for managing citizen-science projects
  Mantained and Contributed to CritterSpot, for individual whale identification and tracking
  Technologies : NativeScript, Angular, node.js, Android, PostgreSQL

Thinkful (Part Time) – **Data Science Technical Expert** Jan. 2019 – March 2019
  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 AHDH/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/Consultant** 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, AWS, PostgreSQL

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, Chimpy, Docker, Jira, Basecamp

EMC^2 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 **_numpy, Python_**
Topic modeling and applications, a presentation for non-statisticians **_beamer, LaTeX_**
Workshop collaborative introduction to GitHub and slides **_markdown, bash, github.api_**
Morphological Watersheding Algorithms **_pyspark, numpy, ndimage, Python_**
Relevance Vector Machine **_Julia_**
Information Retrieval Cluster/Rank Demo Harness **_flask, numpy, nltk, sklearn, Python_**
Gene Data Breast Cancer Drug Predictor **_R, caret_**
Distributed Fully Homomorphic Encryption System **_Hadoop, Sagemath_**
Concurrent Elliptic Curve Cryptography Module **_Sagemath, Erlang_**
Multilingual Analysis of Subordinating and Coordinating Conjunctions **_R, Perl_**
AdaRailz Concurrent Model Train Control System **_Ada_**

Education

Oregon Health Science University   CSLU
Computer Science MSc
2016 – present

Courses :

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

Western Washington University   Computer Science
Computer Science BS, Mathematics Minor
June 2012

Electives :

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