

Philip Robinson

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Personal Statement

I love to work on hard problems and value the knowlege needed to generate solutions in new domains. I am an adaptable engineer, whose work history spans products and research in machine learning, software engineering, scientific computing, and computer securities.

Skills/Experience :

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

Work Experience

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

Acted as project lead and managed communication in a remote environment without supervision
Researched deep anomaly detectors, to index bioacoustic events from a 10 year audio track
Measured effects of adaptive spectral subtraction, for audio denoising, on model accuracy
Developed ACOio, an intuitive ACO track explorer, to rejuvenate data access for researchers

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

HappyWhale - Staff Software Engineer March 2019 - present

Worked as software developer in nimble small team in both a remote and onsite environment
Developed SciDir, a cross platform tablet application for managing citizen-science projects
Maintained and contributed to user tools for individual whale identification and tracking

Technologies : NativeScript, Angular, node.js, Android, PostgreSQL, Java

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 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 and FMRI data, on ADHD/ASD studies
Acted as OSS and Securities lead, developing, training and enforcing best practices

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

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

Developed custom photo image processing tools and pipelines for low cost spectral analysis
Authored educational material in light pollution's effect on economy, biology, and technology
Developed natural language processing tools to organize and explore Myeloma clinical trials
Provided technology tutorials and consulting on code optimization, NLP, and image processing

Technologies : Python, numpy, skimage, AWS, ponyorm, PostgreSQL, ZenHub, CLiNER

Galois Inc. - R&D Software Engineer April 2014 - Dec 2015

Developed processing pipelines and workflows to enable evaluator work for DARPA programs
Helped run professional trainings to disseminate new probabilistic programming languages
Produced biannual quantitative and qualitative reports on for DARPA and language developers
Contributed to PPAML, Overseas Voting Foundation, Safeware, Robot Fast Track

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

Neato Projects

Topic modeling and applications, a presentation for non-statisticians	<i>beamer, ETX</i>
Workshop collaborative introduction to GitHub and slides	<i>markdown, bash, github.api</i>
Distributed Morphological Watersheding Algorithms	<i>pyspark, numpy, ndimage, Python</i>
Information Retrieval Cluster/Rank Demo Harness	<i>flask, numpy, nltk, sklearn, Python</i>
Distributed Fully Homomorphic Encryption System	<i>Hadoop, Sagemath</i>
Concurrent Elliptic Curve Cryptography Module	<i>Sagemath, Erlang</i>

Education

Oregon Health Science University

Computer Science MSc

2016 - present

Courses :

Analysis of Sequences
Artificial Intelligence
Computing Ethics
Deep Learning
Image Processing
Information Retrieval
Problem Solving with Large Clusters

Western Washington University

Computer Science BS, Mathematics Minor

June 2012

Courses :

Unix Software Development
Windows Software Development
Operating Systems
Computer Networks
Software Project Requirements Analysis
Software Project Design
Software Project Implementation
Analysis of Algorithms

Electives :

Abstract Algebra
Artificial Intelligence
Computer Architecture
Computer Graphics
Cryptography & Elliptic Curves
Elementary Real Analysis

Machine Learning

Natural Language Processing
Machine Learning
Machine Learning, Advanced Topics
Signal Processing, Speech
Signal Processing, Advanced Topics
Univariate Statistical Analysis
Statistical Methods

Computer Science & Cryptography

Linear/Non-Linear Data Structures
Discrete Structures
Formal Languages/Automata
Programming Languages
Concurrent Programming
Computer Organization I/II
Probability and Statistical Inference
Object-Oriented Programming in C++

Functional Programming
Homomorphic Encryption Systems
Linear Algebra I/II
Natural Language Processing
Number Theory
Ordinary Differential Equations