Philip Robinson

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Personal Statement

I am an adaptable engineer, whose work history spans products and research in machine learning, software engineering, and computer securities. I have successfully adopted new technologies/languages for nearly every completed deliverable.

Skills/Experience :

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

Work Experience

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

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'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 and FMRI data, on AHDH/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) – 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, PostgreSQL

Galois Inc. – Research 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	***beamer, LaTeX***
Workshop collaborative introduction to GitHub and slides	***markdown, bash, github.api***
Distributed Morphological Watersheding Algorithms	***pyspark, numpy, ndimage, Python***
Information Retrieval Cluster/Rank Demo Harness	***flask, numpy, nltk, sklearn, Python***
Distributed Fully Homomorphic Encryption System	***Hadoop, Sagemath***
Concurrent Elliptic Curve Cryptography Module	***Sagemath, Erlang***

Education

Oregon Health Science University — Machine Learning

Computer Science MSc
2016 – present

Courses :

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

Western Washington University — Computer Science & Cryptography

Computer Science BS, Mathematics Minor
June 2012

Electives :

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