Philip Robinson

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https://github.com/probinso

Personal Statement

I'm an experienced Software Engineer / Data Scientist interested in interdisciplinary work in environmental, social good, citizen science, & computer security projects.

Skills/Experience

Research MVPs	Linux Systems	Education/Mentoring	Ticketing Systems
ML/Data Sciences	Remote Work	Communication	Rubber Ducking

GrammaTech – R&T Machine Learning Engineer March 2020 – present

Conducted language processing research in decompilation for reverse engineering binaries
Performed research & evaluated ML work on compiled binaries for vulnerability detection
Participated in authoring & reviewing SBIR/STTR proposals for DOD/DARPA solicitations

Technologies : Python, C, PyTorch, RetDec, asts.AST, GTIRB, Dwarf, Docker, celery, DIRTY

HappyWhale – Mobile / Full Stack Engineer March 2019 – March 2020

Developed Polar Collective App, a x-platform phone app supporting citizen science projects
Core developer for user tools in logging whale sightings for identification & tracking
Contributed to data & access API supporting researchers in population ecology projects

Technologies : Native/TypeScript, Angular, Android/iOS, PostgreSQL, Java, Spring, firebase

NASA Jet Propulsion Lab – Data Science Intern June 2018 – Sept 2018

Developed employee expert recommender system, eliminating weeks in ticket triage/assignment
Designed & completed MVP from research papers & advisement of top NASA/JPL employees
Defended application of advanced topic models to non-computational decision makers at JPL

Technologies : Python, nltk, gensim, pyLDAvis, pandas, Jupyter, Author-Topic-Model, LDA

OHSU DCAN Neuroimaging Lab – Graduate Research Assistant Oct 2017 – June 2018

Contributed to microbiome population analytics, studying menopause & reproductive health
Developed processing pipeline & audit tools for survey & fMRI data, on ADHD/ASD studies
Provided git, project management, & security trainings for teams with varying backgrounds

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

Graduate Research CSLU/ACO – Machine Learning (Audio Data) Sept 2017 – Dec 2019

Developed deep anomaly detectors for marine acoustics from signal processing research papers
Measured effects of spectral subtraction & deep noise reduction techniques on ML models
Developed ACOio track explorer, enabling research on (10 yr/12 TB) continuous audio track
Led & enabled a four week community data deep dive series through PDSG on marine acoustics

Technologies : ACOio, Keras, tensorflow, PyTorch, scipy.signal, Jupyter, flask, Angular

RGB Optics (Part Time) – Volunteer Developer & Consultant Nov 2015 – present

Developed remote sensing tools for low cost spectral analysis, in light pollution surveys
Image processing consult on low cost infant hypoxic ischemic encephalopathy (iHIE) tests
Developed natural language processing (NLP) tools to explore Myeloma clinical trials
Provided technology trainings/consultation on code optimization, NLP, & image processing

Technologies : Python, skimage, sklearn, AWS, CliNER, Morphological Watersheds, OpenCV

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

Developed processing pipelines & workflows to enable evaluator work for DARPA programs
Helped run professional trainings to disseminate new probabilistic programming languages
Authored material on disenfranchisement under Free & Fair for the Overseas Voting Foundation
Produced biannual quantitative & qualitative reports for DARPA & participating PPAML teams

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

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Oregon Health Science University

Computer Science & Machine Learning
Masters of Science
2016 – 2019

Western Washington University

Computer Science & Cryptography
Bachelor of Science, Math Minor
2007 – 2012