Philip Robinson

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https://github.com/probinso

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

Skills/Experience

Machine Learning	Prototypes	Remote Work	Ticketing Systems
Data Science	Linux Systems	Education/Mentoring	Rubber Ducking

Technologies

Python/PyTorch/sklearn	R/dplyr	skimage/scipy.signal	Gtirb/Dwarf/asts.AST
C/C++	Angular/NativeScript	Docker	AWS/GCP/firebase

GrammaTech — **Machine Learning Researcher II** **March 2020 – present**
Conducted language processing research to increase legibility in binary decompilation tasks
Performed deep learning & ML research on binaries for software vulnerability detection
Developed data pipeline to distribute feature extraction over networked virtual machines
Implemented & incorporated code from academic research articles into release products
Participated in authoring & reviewing SBIR/STTR proposals for DOD/DARPA solicitations

HappyWhale — **Mobile / Full Stack Engineer** **March 2019 – March 2020**
Developed Polar Collective, a x-platform citizen sciencery app to support ecology research
Developed core tools for tracking marine life sightings & individual whale identification
Contributed to data access API, supporting researchers in population ecology projects

NASA's Jet Propulsion Lab — **Graduate Data Science Intern** **June 2018 – Sept 2018**
Developed employee expert recommender system, to eliminate weeks in ticket triage & assignment
Designed & completed prototype from research papers & advisement of top NASA/JPL employees
Defended & proved unconventional application of topic model, typically used in authorship
Open source contribution, fixing bug in gensim's natural language processing library

DCAN Neuroimaging Lab — **Graduate Research Assistant** **Oct 2017 – June 2018**
Analyzed relationship of adjacent microbiome populations for menopause & reproductive health
Developed data processing/audit tools for survey & fMRI data, supporting ADHD/ASD studies
Provided git, project management, & security trainings for teams with varying readiness levels

Graduate Research CSLU/ACO – **Machine Learning (Audio Data)** **Sept 2017 – Dec 2019**
Developed VAEs and anomaly detectors for marine acoustics from signal processing research
Developed ACOio track explorer, enabling research on 10 year (12 TB) continuous audio track
Measured effects of spectral subtraction & deep noise reduction techniques on ML models
Led & enabled a four week community data deep dive, through PDSG, on marine acoustics

RGB Optics LLC — **Volunteer Developer & Consultant** **Nov 2015 – present**
Developed remote sensing tools to classify citiscape light sources for light pollution study
Image processing consult on low cost blood tests for infant hypoxic ischemic encephalopathy
Developed natural language processing (NLP) tools to explore Multiple Myeloma clinical trials
Provided technology trainings/consultation on code optimization, NLP, & image processing

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
Wrote on disenfranchisement under Free & Fair for secure internet voting feasibility study
Produced biannual quantitative & qualitative reports for DARPA & participating PPAML teams

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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