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 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

Global Fish Watch – Scientific Programmer May 2022 – present

GrammaTech – Machine Learning Researcher March 2020 – April 2022

- 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 attribution

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
- 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