Philip Robinson

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https://github.com/probinso

Machine Learning / Scientific Programmer driven by interdisciplinary work in natural sciences, computer securities, remote sensing, passive monitoring &|| citizen sciencery

Skills/Experience

Machine Learning	Global Teams	Remote Work	MLOps/DevOps
Data Sciences	Linux Systems	Education/Mentoring	Rubber Ducking

Technologies

Python/PyTorch/sklearn	R/dplyr	GDAL/cartopy/ESA-SNAP	AWS/GCP/firebase
C/C++	skimage/scipy.signal	Gtirb/Dwarf/asts.AST	Docker

Blue Oasis – Digital Twin Engineer (Ocean Sciences) May 2025 – present
- Contributed to multi-label edge marine acoustics ML pipeline, to track vessels & marine life
- Full stack security & performance work on HydroTwin, a user focused analytics & IR dashboard
- Advised DL & surrogate model design on PHAROS & SmartFisher, for ocean ecosystem monitoring

Global Fishing Watch – Scientific Programmer (Earth Imaging) May 2022 – March 2025
- Implemented remote sensing pipeline for detecting vessels & matching to reported GPS locations
- Evaluated vessel detection over terrabytes of processed synthetic aperture radar (SAR) images
- Developed gfwsat to join & catalog millions of satellite scenes, serving global ocean surveys
- Developed simple offline satellite image labeler, supporting all shapely geometries by lat/lon
- Led technology transfer work, moving research prototypes to production & automated pipelines
- Developed collaboration strategies & best practices, for remote & international teams

GrammaTech – Machine Learning Researcher II March 2020 – April 2022
- Research on binaries in vulnerability detection & improving code legability from decompilation
- Developed feature extraction pipeline over hosted virtual machines on terrabytes of data
- Implemented, verified & incorporated ML/DL code from academic research into release products
- Participated in authoring & reviewing SBIR/STTR proposals for DOD/DARPA funding solicitations

HappyWhale – Mobile & Full Stack Engineer March 2019 – March 2020
- Developed x-platform citizen science phone app for eco-tourism & wildlife population surveys
- Developed core tools for tracking marine life sightings & individual whale identification
- Contributed to data access API & web UI, supporting researchers in population ecology studies

NASA JPL – Data Science Intern (Natural Text) June 2018 – Sept 2018
- Prototyped employee expert recommender system, to eliminate weeks in ticket triage/assignment
- Designed & completed prototype from research papers & advisement of top NASA/JPL employees

OHSU Neuroimage Lab – Graduate Research Assistant Oct 2017 – June 2018
- Analyzed relationship of adjacent microbiome populations for menopause & reproductive health
- Developed processing/audit tools for survey & fMRI data to support ABCD study for ADHD/ASD
- Provided git, project management & security trainings for teams with varying readiness levels

OHSU Masters Research – Machine Learning (Marine Acoustics) Sept 2017 – Dec 2019
- Developed track explorer for 10YR continuous audio track, supporting Aloha Cabled Observatory
- Developed anomaly detectors for noisy marine acoustics, based on variational auto-encoders
- Measured effects of spectral subtraction & DL models to reduce noise & improve audio quality

Galois Inc. – R&D Software Engineer April 2014 – Dec 2015
- Developed processing pipelines & workflows for evaluator work on multiple SBIR/STTR programs
- Setup brittle PPAML languages on 30+ participants' devices for two annual DARPA summer schools
- Co-authored secure internet voting feasability study for non-technical, policy-focused audience

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Oregon Health Science University
Computer Science & Machine Learning
Masters of Science

Western Washington University
Computer Science & Cryptography
Bachelor of Science, Math Minor