

Philip Robinson

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<https://github.com/probinso>

10+ years experience in software & machine learning on interdisciplinary teams supporting work across natural sciences, computer securities, remote sensing, & || citizen sciencery

Skills/Experience

Machine Learning
Data Sciences

Remote/Global Teams
Technology Transfer

Linux Systems
Education/Mentoring

MLOps/DevOps
Rubber Ducking

Technologies

Python/PyTorch/sklearn
C/C++

skimage/scipy.signal
GDAL/cartopy/ESA-SNAP

Gtirb/Dwarf/asts.AST
AWS/GCP/firebase

SQL/BQL/PostGIS
Docker

Blue Oasis

- Digital Twin Engineer (Ocean Sciences)

May 2025 – Oct 2025

Improved edge ML pipeline for multi-label marine acoustics, to indentify/track vessels & marine life
Full stack + security & performance on HydroTwin, a user focused acoustics analytics/IR dashboard
Advised DL & surrogate model design on PHAROS & SmartFisher, for ecosystem monitoring & simulation

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 gwfsat 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 docs, for remote & international teams

GrammaTech

- Deep Learning Engineer II (Security)

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's Jet Propulsion Lab

- 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 (Medical)

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 MSc 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 (Security)

April 2014 – Dec 2015

Developed processing pipelines & workflows for evaluator work on multiple DARPA SBIR/STTR programs
Setup brittle PPAML languages on 30+ participants' devices for two annual DARPA summer schools
Co-authored secure internet voting feasibility study for non-technical, policy-focused audience

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

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