

# Philip Robinson

Portland, OR  
UTC-8

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<https://github.com/probinso>

I'm a Software Engineer / Data Scientist driven towards interdisciplinary work in environmental sciences, security/privacy systems, OSInt & citizen sciencery work.

## Skills/Experience

Machine Learning	Prototypes	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

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### Global Fishing Watch - Scientific Programmer (Research) May 2022 - present

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 custom labeler on very large images, to make ML training data for object detection  
Led technology transfer work, moving research prototypes to production & automated pipelines  
Developed an object relational mapper to encourage cloud/database best practices & documentaiton

### 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 Jet Propulsion Lab - Data Science Intern (NLP) 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 Neuroimaging 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

### Graduate Research (OHSU) - Machine Learning (Audio Data) 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

### RGB Optics LLC - Volunteer Developer & Consultant Nov 2015 - present

Developed photo remote sensing tools to classify light technologies for light pollution studies  
Provided technology training/consult on code optimization, medical NLP & image processing

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

Developed processing pipelines & workflows for evaluator work on multiple DARPA SBIR programs  
Helped run professional trainings to disseminate new probabilistic programming languages  
Wrote on disenfranchisement under Free & Fair for secure internet voting feasibility study

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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