Philip Robinson

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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

Blue Oasis   **– Digital Twin ML Engineer (Ocean)**   **June 2025 – present**

- Design & implementation of ML models for sensor agnostic strategies in edge deployed low resource environments
- Custom marine acoustics IR system to drive & enable research in feature extraction strategies
- Developed light weight wrapper for ML pipeline to standardize experiments with descriptive config files
- Full stack development on analytics & information retrieval dashboard for marine acoustics monitoring

Global Fishing Watch   **– Scientific Programmer (Research)**   **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 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 on code optimization, NLP on medical texts & 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   **Western Washington University**

    Computer Science & Machine Learning   **Computer Science & Cryptography**

    Masters of Science   Bachelor of Science, Math Minor