Philip Robinson

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https://github.com/probinso

I'm an experienced Software Engineer / Data Scientist with passion for interdisciplinary, environmental, scientific, privacy, OSInt & 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 Fishing Watch — **Scientific Programmer (Research)**   **May 2022 – present**
- Remote sensing, using CFAR detector to match ships from SAR satellite images to AIS/VMS data
- Developed gfwsat to join & catalog millions of satellite scenes, serving global ocean surveys
- Developed custom labeler for very large SAR images, to make training data for object detection
- Led technology transfer work, moving research prototypes to production & automated pipelines
- Developed a light ORM/utils library to enforce 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 cloud hosted virtual machines on TBs 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 VAEs & anomaly detectors for applied marine acoustics in very noisy environments
- Developed a track explorer to enable research on 10 year (12 TB) continuous audio from ACO
- Measured effects of spectral subtraction & DL models to reduce noise & improve audio quality

RGB Optics LLC — **Volunteer Developer & Consultant**   **Nov 2015 – present**
- Developed remote sensing tools to classify light technologies in photos for skyglow studies
- Consult on image processing for low cost diagnosis of infant hypoxic ischemic encephalopathy
- 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