

# Philip Robinson

Portland, OR  
UTC-8

probinso+res@protonmail.com  
(+1) 206.377.9747

<https://github.com/probinso>

## Personal Statement

I'm an experienced Software Engineer / Data Scientist interested in interdisciplinary work in environmental, social good, citizen science, & computer security projects.

## Skills/Experience

Research MVPs	Linux Systems	Education/Mentoring	Ticketing Systems
ML/Data Sciences	Remote Work	Communication	Rubber Ducking

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### GrammaTech - R&T Machine Learning Engineer March 2020 - present

Transferred NLP research to decompilation in binaries & reverse engineering applications  
Performed research & evaluated ML work on compiled binaries in vulnerability detection  
Participated in authoring & reviewing SBIR/STTR proposals for DOD/DARPA solicitations

**Technologies :** Python, C, PyTorch, RetDec, asts.AST, GTIRB, Dwarf, Docker, celery, DIRTY

### HappyWhale - Mobile / Full Stack Developer March 2019 - March 2020

Developed Polar Collective App, a x-platform phone app supporting citizen science projects  
Core developer for user tools in logging whale sightings for identification & tracking  
Contributed to data & access API supporting researchers in population ecology projects

**Technologies :** Native/TypeScript, Angular, Android/iOS, PostgreSQL, Java, Spring, firebase

### NASA Jet Propulsion Lab - Data Science Intern June 2018 - Sept 2018

Developed employee Expertise Recommender System, automating expensive critical tasks  
Designed & completed prototype from research papers & advisement of top NASA/JPL employees  
Presented & defended NLP/ML prototype to non-computational decision makers at JPL

**Technologies :** Python, nltk, gensim, pyLDavis, pandas, Jupyter, Author-Topic-Model, LDA

### OHSU DCAN Neuroimaging Lab - Graduate Research Assistant Oct 2017 - June 2018

Contributed to microbiome population analytics, studying menopause & reproductive health  
Developed processing pipeline & audit tools for survey & fMRI data, on ADHD/ASD studies  
Provided git, project management, & security trainings for teams with varying backgrounds

**Technologies :** Python, Bash, R, dplyr, phyloseq, neo4j, ponyorm, stan, GitLab, Docker

### Graduate Research CSLU/ACO - Machine Learning (Audio Data) Sept 2017 - Dec 2019

Implemented & transferred deep anomaly detectors from research papers to marine acoustics  
Measured effects of spectral subtraction & deep noise reduction techniques on ML models  
Developed ACOio track explorer, enabling research on (10 yr/12 TB) continuous audio track  
Led & enabled a four week community data deep dive series through PDSG on marine acoustics

**Technologies :** ACOio, Keras, tensorflow, PyTorch, scipy.signal, Jupyter, flask, Angular

### RGB Optics (Part Time) - Volunteer Developer & Consultant Nov 2015 - present

Developed remote sensing tools for low cost spectral analysis, in light pollution surveys  
Image processing consult on low cost infant hypoxic ischemic encephalopathy (iHIE) tests  
Developed natural language processing tools to organize & explore Myeloma clinical trials  
Provided technology trainings/consultation on code optimization, NLP, & Image processing

**Technologies :** Python, skimage, sklearn, AWS, CLiNER, Morphological Watersheds, OpenCV

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

Developed processing pipelines & workflows to enable evaluator work for DARPA programs  
Helped run professional trainings to disseminate new probabilistic programming languages  
Authored material on disenfranchisement under Free & Fair for the Overseas Voting Foundation  
Produced biannual quantitative & qualitative reports for DARPA & participating PPAML teams

**Technologies :** Python, SLURM, Scala, Figaro, Chimpy, Docker, Jira, Basecamp

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### Oregon Health Science University

Computer Science & Machine Learning  
Masters of Science  
2016 - 2019

### Western Washington University

Computer Science & Cryptography  
Bachelor of Science, Math Minor  
2007 - 2012