

# Philip Robinson

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UTC-8

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<https://github.com/probinso>

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

## Skills/Experience

|                  |               |                     |                   |
|------------------|---------------|---------------------|-------------------|
| ML/Data Sciences | Linux Systems | Education/Mentoring | Ticketing Systems |
| Prototypes       | Remote Work   | Communication       | Rubber Ducking    |

## Technologies

|                        |                      |                      |                      |
|------------------------|----------------------|----------------------|----------------------|
| Python/PyTorch/sklearn | R/dplyr              | skimage/scipy.signal | Gtirb/Dwarf/asts.AST |
| C/C++                  | Angular/NativeScript | Docker               | AWS/GCP/firebase     |

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

- Conducted language processing research to increase legibility in binary decompilation tasks
- Performed research & evaluated ML work on compiled binaries for vulnerability detection
- Developed data pipeline to distribute feature extraction over networked virtual machines
- Implemented & incorporated code from academic research articles into release products
- Participated in authoring & reviewing SBIR/STTR proposals for DOD/DARPA solicitations

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

- Developed Polar Collective App, a x-platform phone app supporting citizen science projects
- Developed core tools for recording marine life sightings & individual whale identification
- Contributed to data & access API supporting researchers in population ecology projects

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

- Developed employee expert recommender system, eliminating weeks in ticket triage/assignment
- Designed & completed prototype from research papers & advisement of top NASA/JPL employees
- Defended unconventional application of latent dirichlet allocation (a topic mixture model)
- Open source contribution, fixing bugs in the gensim natural language processing library

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

- Studied menopause & reproductive health, by analysing population relationships of microbiomes
- Developed data processing/audit tools for survey & fMRI data, supporting ADHD/ASD studies
- Provided git, project management, & security trainings for teams with varying tech readiness

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

- Developed deep anomaly detectors for marine acoustics from signal processing research
- Developed ACOio track explorer, enabling research on 10 year (12 TB) continuous audio track
- Measured effects of spectral subtraction & deep noise reduction techniques on ML models
- Led & enabled a four week community data deep dive, through PDSG, on marine acoustics

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

- Developed remote sensing tools to identify sources in citiscapes for light pollution study
- Image processing consult on low cost blood tests for infant hypoxic ischemic encephalopathy
- Developed natural language processing (NLP) tools to explore Myeloma clinical trials
- Provided technology trainings/consultation on code optimization, NLP, & image processing

### 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
- Wrote on disenfranchisement under Free & Fair for secure internet voting feasibility study
- Produced biannual quantitative & qualitative reports for DARPA & participating PFAML teams

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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