Philip Robinson

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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

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
- Developed distributed feature extraction & ML training pipelines supporting DARPA programs
- 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
- Developed 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 AHDH/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

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
- Authored training material on effects of light pollution on economy, biology, & technology
- Research consult on statistics & image processing for low cost blood testing technologies
- Developed natural language processing tools to organize & explore Myeloma clinical trials
- Provide technology tutorials/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
- Produced biannual quantitative & qualitative reports for DARPA & other 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