Peyton D. Murray, Ph. D.

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Skills	Open-Source Leadership, Scientific Computing, Data Visualization, Full-Stack Development
Languages	Python, Go, C/C++, Rust, Typescript
Frameworks & Tools	CI/CD (GitHub Actions), FastAPI, Django, React, PostgreSQL, Pytest, Python scientific ecosystem, Meson

Experience

OpenTeams (formerly Quansight)   *Senior Software Engineer*   May 2021 - Present

- Led design and delivery for open source contracts as tech lead for teams of 5-10 engineers on contracts as large as ~$1M, providing open-source consulting services for foundational packages in the Python scientific ecosystem. Delivered all contracts on schedule and within budget.
- Mentored and advocated for a global team of junior engineers; managed multiple open-source contracts simultaneously.
- As an individual contributor I developed bug fixes, features, accessibility enhancements, performance optimizations, tests, improved observability, CI/CD, and project maintenance for `jupyter`, `scipy`, `numpy`, `conda`, `ray`, `tensorflow`, and many smaller projects used by millions of Python developers.
- Reduced `ray`'s CI documentation build time (~1hr) by 50%, and automated the building, linting, publishing, and testing of the `tensorflow` ecosystem with ~40 CI/CD workflows spread across multiple projects.
- Built and released Python code in addition to C/C++ and Rust for performance-critical applications.

Voltaiq   *Software Engineer*   Oct 2019 - May 2021

- Developed, deployed, maintained, and supported production deployments for a SAAS data analytics platform for the world's largest battery manufacturers and consumers.
- Built REST APIs (Python, Django, PostgreSQL) and React dashboards with Plotly.js for data visualization.

Tampere University   *Postdoctoral Scholar*   Jan 2019 - Aug 2019

- Developed 3D voronoi tessellation and performance improvements for an open-source magnetics simulation engine using Go and CUDA C, improving materials research for thousands of top magnetics scientists.
- Scaled simulations by automating configuration and parallelizing across a GPU cluster using SLURM.

UC Davis Department of Physics   *Graduate Student Researcher*   Aug 2012 - Dec 2018

- Developed open source Python tools for analyzing and plotting magnetic measurements and MCMC sample analysis.

Lawrence Berkeley National Laboratory   *Junior Specialist*   May 2011 - May 2012

- Developed control software (C++ and Qt) for automated circuit testing. Hardware tested with this system was deployed as part of the Insertable B-Layer system at the Large Hadron Collider in 2014, enabling continued studies of the Higgs boson.

Education	University of California, Davis: M.S. & Ph.D. Physics	2012 - 2018
	St Mary's College of California: B.S. Physics, Minor: Mathematics	2007 - 2011
Teaching	*Teaching Assistant*, **Physics Department, University of California, Davis**	2012 - 2016
	Student Tutor and Live-In Mentor, **Dept. of Physics, St Mary's College of California**	2010 - 2011
Awards	3rd Place Winner, 2020 John D. Hunter Excellence in Plotting Contest. Entry (video), Source repository	

Publications, selected conferences, and laboratory skills are listed on the extended CV on my website.