Peyton D. Murray

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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

Quansight *Senior Software Engineer* May 2021 - Present

- Backend open-source engineer in Quansight's consulting branch. Contributed open source bug fixes, feature development, and maintenance for large and critical packages in the Python scientific ecosystem, including `jupyter`, `scipy`, `numpy`, `conda`, and many smaller projects. Reduced `ray`'s CI documentation build time (~1hr) by 50%, and automated building, linting, publishing, and testing for the `tensorflow` ecosystem with ~40 CI/CD workflows
- Built and released Python code in addition to C/C++ and Rust for performance-critical applications.
- Led design and delivery for open source contracts as tech lead for teams of 5-10 engineers on projects used by millions of developers, including NumPy, SciPy, Jupyter, Ray, TensorFlow. Delivered all contracts on schedule and within budget.
- Mentored and advocated for a global team of junior engineers; managed multiple open-source contracts simultaneously.

Voltaiq *Software Engineer* Oct 2019 - May 2021

- Developed, deployed, and maintained 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 tesselation and performance improvements for an open-source magnetics simulation engine using Go and CUDA C.
- Scaled simulations by automating simulation 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.