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 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.
- 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 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, 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 tessellation and performance improvements for an <u>open-source magnetics</u> <u>simulation engine</u> using Go and CUDA C.
- Scaled simulations by automating configuration and parallelizing across a <u>GPU cluster</u> 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 <u>Insertable B-Layer system</u> 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 Assistant, Physics Department, University of California, Davis

2012 - 2016 2010 - 2011

Student Tutor and Live-In Mentor, Dept. of Physics, St Mary's College of California

Awards

3rd Place Winner, 2020 John D. Hunter Excellence in Plotting Contest. Entry (video), Source

repository