

Teddy. Rendahl

ENGINEER · PYTHON DEVELOPER · PHYSICIST

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Experience

SLAC National Accelerator Laboratory

Menlo Park, CA

USER EXPERIENCE LEAD ENGINEER

Dec. 2017 - Present

- Collected and synthesized usability requirements from scientific, engineering and operational groups at SLAC
- Developed a platform to display streaming controls system data from a multitude of different data sources
- Created a schema for the creation, deployment, and management of hundreds of APIs and graphical user interfaces for vital scientific instrumentation

SLAC National Accelerator Laboratory

Menlo Park, CA

SCIENCE AND ENGINEERING ASSOCIATE

Jun. 2015 - Present

- Led teams that automated scientific processes within the lab
- Modernized Python deployment tools including migrating older repositories to GitHub and other Continuous Integration services
- Worked closely with scientists and engineers to deploy hundreds of sensitive scientific instruments in compressed time frames
- Managed Python APIs and GUIs for experimental operations and data observation

Astrophysics Department at UCSC

Santa Cruz, CA

UNDERGRADUATE RESEARCH, ASTROPHYSICS DEPARTMENT

July 2014 - Aug 2015

- Developed a model that predicted the spectrum emitted by young stellar populations, and the amount this emission would vary over the course a specified period of time
- Optimized code to make efficient use of campus computing clusters
- Wrote an undergraduate thesis and later contributed to a published scientific paper

Education

AWARDS

2014 **Dean's Undergraduate Research Award,**

UC Santa Cruz

DEGREE

University of California Santa Cruz

Santa Cruz, CA

BACHELOR OF SCIENCE IN APPLIED PHYSICS

Sept 2010 - June 2014

- Diverse coursework in Electrical Engineering, Computer Science and Physics
- Twice received Dean's Honors

Skills

Python PyQt, CONDA, NumPy, Pandas, matplotlib, SciPy, Jupyter

Other Software PLC Programming, Version Control (Git), Continuous Integration, EPICS, Linux

Domains of Interest Data Analysis, Modelling, User Experience, and Graphical User Interfaces

Presentations

Sept. 2018 **LCLS-II Beamline Controls**, Overview of User Experience Improvements at LCLS

LCLS Users Meeting

Jun. 2018 **Typhon**, Automated Generation of GUIs for Scientific Instrumentation

EPICS Collaboration

Oct. 2017 **Skywalker**, Automated Beam Delivery at LCLS

ICALEPCS

Oct. 2016 **PyDM**, PyQt-based Display Manager for EPICS

EPICS Collaboration

Publications

SLUG - Stochastically Lighting Up Galaxies III

UC Santa Cruz

A SUITE OF TOOLS FOR SIMULATED PHOTOMETRY SPECTROSCOPY STOCHASTIC STELLAR POPULATIONS

Dec. 2013 - Aug. 2014

- Helped write and document a large scientific Python codebase capable of created accurate simulations of young stellar populations.
- Received Undergraduate Research Award for work done for this publication and related thesis work.

Se-SAD Serial Femtosecond Crystallography

Linear Coherent Light Source

DATASETS FROM SELNOBIOTINYL-STREPTAVIDIN

Dec. 2016 - Aug. 2017

- Designed and deployed hardware and software for setup of experiment.
- This included the timing system capable of coordinating X-Ray and visible light laser sources on a femtosecond time scale