

# Teddy. Rendahl

SOFTWARE ENGINEER · TEAM LEADER · PHYSICIST

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## Experience

### OSARO

ENGINEERING MANAGER

San Francisco, CA

Nov. 2022 - Present

- Managed a team of up to eight engineers, aligning product requirements with technical solutions using Agile methodology.
- Led the migration of a Python repository with over 40,000 commits to Rust, coaching developers through the conversion.
- Oversaw, wrote or reviewed all engineering tasks to deploy production ready computer vision and robot pick and place solutions.

### OSARO

SENIOR SOFTWARE ENGINEER

San Francisco, CA

Sep. 2019 - Present

- Architected internal and external APIs for deployment of three different products across four continents.
- Led a cross-functional scrum team working on robotics and ML model accuracy to improve bin clear rate to upwards of 99%
- Optimized Python software, model inference, and path planning to increase robotic picking rate to over 1200 picks per hour.

### SLAC National Accelerator Laboratory

SCIENCE AND ENGINEERING ASSOCIATE

Menlo Park, CA

Jun. 2015 - Aug. 2019

- Incorporated a wide variety of instrumentation into the distributed software infrastructure of the accelerator.
- Led interdisciplinary teams that automated scientific and engineering processes within the lab.
- Developed a novel UI to display high rate instrument data interfaces for vital scientific operations.
- Modernized the Python ecosystem to incorporate test driven development practices and continuous integration.

### Astrophysics Department at UCSC

UNDERGRADUATE RESEARCHER, ASTROPHYSICS DEPARTMENT

Santa Cruz, CA

July 2014 - Aug 2015

- Developed a Python library that predicted the temporal variance in the spectrum of light emitted by young stellar populations.
- Optimized scientific algorithms using NumPy and MultiProcessing to improve cycle time of large scale simulations.
- Contributed to a scientific publication that continued work from my thesis.

## Skills

**Python** NumPy, OpenCV, Pytest, Pandas, Matplotlib, Asyncio, Multiprocessing

**Rust** Bevy, Nalgebra, Tokio, WebAssembly

**Other Software** Distributed Systems, Microservice Architecture, Git, Continuous Integration, Linux, gRPC, SQL

## Education

### AWARDS

2015 **Dean's Undergraduate Research Award**, Stochasticity in Nebular Emission Lines.

UC Santa Cruz

### DEGREE

#### University of California Santa Cruz

BACHELOR OF SCIENCE IN APPLIED PHYSICS

Santa Cruz, CA

Sept 2010 - June 2014

- Diverse coursework in Electrical Engineering, Computer Science and Physics
- Dean's Honors (2013, 2014)

## 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