Aaron Deich

Physicist &
Data Scientist

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Here is my little about-me pitch

- Main career right now Main career right now Main career right now Main career right now Main career right now Main career right now Main career right now Main career right now Main career right now Main career right now Main career right now Main career right now Main career right now
- Masters thesis masters thesis Masters thesis masters thesisMasters thesis masters thesisMasters thesis masters thesisMasters thesis masters thesisMasters thesis masters thesisMasters thesis masters thesisMasters thesis masters thesisMasters thesis masters thesisMasters thesis masters thesis masters thesis
- I invest a significant amount of time in creating and developing Python tools for use in data-intensive science, including packages like *Scikit-Learn*, *SciPy*, *AstroPy*, *Altair*, and many others.

Data Science and Software Experience

Lick Observatory
2018-2019
I ranked causes of unexpectedly high starlight measurement error for an 8M robotic planet-hunting telescope, describing correlation and dependency across dozens of telescope sensor channels (temperature, windspeed, etc). I combined millions of records across mismatched SQL telemetry databases and used Jupyter Python notebooks to perform regression and PCA analysis to look for causal relationships. Through frequent discussion with the telescope engineers, my insights were instrumental in guiding where to focus improvement efforts, and the observatory has since reduced the telescope's error to theoretical minimum levels. Github project

Independent Python Developer
2013-2014
I developed DNA sequence string pattern-matching scripts for a cancer research lab.

Markit
2012-2013
etc). I combined millions of records across mismatched SQL telemetry databases and used Jupyter Python notebooks to perform regression and PCA analysis to look for causal relationships. Through

Education

Reed College
2010–Present
Things about my time at Reed. 4 computer science classes. 2 scientific computation classes.

San Jose State University
2011–Present
I am a maintainer of SciPy, the definitive repository for many scientific computing tools available in Python. My contributions are primarily in the sparse matrix package, including code for efficient solutions of large sparse eigenvalue problems, and for efficient traversal and analysis of large sparse graphs.

Computational and Research Projects

Undergraduate Thesis
2011
Simulated supernovae explosions with Monte Carlo in Mathematica. Found this and this.

Building a small working version of Shazam
2016

Teaching Experience

San Jose State University
2014-2018
Teaching Assistant

- Calculus-based Mechanics (Physics 50)
- Physics for non-science majors (2A)

Presentations

Public Thesis Talk hello
2011

Public thesis defense hello
2018

AAPT Summer Conference Presented a poster about my thesis work
2018