

# Kyle Siegel

EXPERIENCED ANALYST · DATA SCIENTIST

38596 U.S. 6, Avon, CO 81620 · Willing to relocate

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*Data analyst and self-taught data scientist with experience at SpaceX writing software to aid the Dynamics team in quick and reliable analysis.*

## Education

### Harvey Mudd College

B.S. IN ENGINEERING, GPA:3.62

- Dean's List: Spring 2011, Fall 2011, Spring 2012, Fall 2012, Spring 2013, Fall 2014, Spring 2014.
- Tau Beta Pi Engineering Honor Society- Awarded to top 20% of engineers.

Claremont, CA

Fall 2010 - Spring 2014

## Engineering Experience

### Satcom Resources

SOFTWARE ENGINEER

- Improving the speed and reliability of orders through software automation.

Avon, CO

June 2016 - Present

### SpaceX

DYNAMICS ENGINEER

- Doubled the reliability and halved the time of test specification creation by designing and implementing a data analysis and data visualization software package using mainly Python, Pandas and Numpy. This allowed engineers to work with large data sets more efficiently leading to more accurate test specifications.
- Deployed Python package to local Pip accessible repository with continuous deployment, automatic testing, and automatic documentation generation using Bamboo, PyLint, Tox, and Sphinx.
- Deployed a Jupyter Notebook application to AWS GovCloud for Dynamicists to use the Python package's data structure, math utilities, data aggregation tools, and data visualization sub-package in a sharable and easily accessible document.
- Decreased flight risk by writing Python scripts that queried thousands of vibration tests and checked against new testing standards for Flight 21(the rocket that landed) ensuring all vibration susceptible components were safe for flight.
- Mitigated component susceptibility to high frequency dynamics by working with designers, predicting vibration and shock environments through data aggregation of test and flight data, and implementing vibration tests to qualify hardware before flight.

Hawthorne, CA

April 2015 - December 2015

### SpaceX

DYNAMICS INTERN

- Determined shock and vibration environments for propulsion, avionic, and structural components on the Falcon 9 rocket and Dragon capsule. Followed by assisting with the testing and verification of these component environments.
- Improved accuracy of shock environments by implementing and analyzing several large scale shock tests to determine shock susceptibility of components.
- Improved speed and reliability of data reviews by developing automated reports in Matlab.

Hawthorne, CA

May 2013 - November 2013

### eSolar Inc.

MEMBER OF 6 PERSON TEAM

- Designed, built, and tested a data acquisition and instrumentation package to measure wind loads on heliostats.
- Wrote data processing code to get force data on heliostats, sync timing from multiple data sources, and present the data in a useful form, followed by putting this data into a database for further use.

Burbank, CA

Fall 2013 - Summer 2014

### Skyline Eco-Adventures

MEMBER OF 5 PERSON TEAM

- Developed prototype of adjustable braking trolley by modeling, testing, and modifying several design alternatives.
- Instrumented each trolley and wrote data analysis code to characterize trolley performance.

Claremont, CA

Fall 2014 - Winter 2014

## Leadership Experience

### McGaw YMCA

PROGRAM DIRECTOR

- Supervised and evaluated 60 staff members per session and fostered appropriate behavior and growth of 200 campers per session, smoothly and safely for 6 sessions with camper, parent, and staff satisfaction above 90%.
- Trained and developed 100 17-23 year old staff members through a 1-2 week pre-summer training and development and feedback sessions throughout the summer with exceptional staff satisfaction.
- Organized staff and camper cabin assignments, weekly staff time off and activity assignments, weekly camper activity signups, onsite camping for every cabin, and weekly special programs.

Fremont, MI

February 2014 - October 2014

### Vail Resorts

SKI INSTRUCTOR

- Achieved PSIA Level 1, 2, and most of 3. In top 20 instructors to attend training.

Vail, CO

Winter 2014, Winter 2015

## Skills

**Programming** Python, C++, Matlab, R, JavaScript, HTML, CSS, LabView, System Verilog.

**Certifications** PSIA Level 2, NOLS Graduate.