Kyle **Siegel**

Experienced Analyst · Data Scientist

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

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Education

Harvey Mudd College
Claremont, CA

B.S. in Engineering with Distinction, GPA:3.62 — *Fall 2010 - Spring 2014*

- 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.
- Coursework: Data Structures and Program Development, Reliability and Test Engineering, Systems Simulation, Materials Engineering, Dynamics of Elastic Systems, Scientific Computing, Advanced Systems Engineering, Dynamics of Rigid Bodies, Continuum Mechanics, Experimental Engineering, Engineering Math, Chemical and Thermal Processes, Digital Electronics & Computer Engineering, Electronic and Magnetic Circuits and Devices, Autonomous Vehicles, Introduction to Signals and Systems, Introduction to Computer Science.

Engineering Experience

Satcom Resources
Avon, CO

Software Engineer — *June 2016 - Present*

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

SpaceX
Hawthorne, CA

Dynamics Engineer — *April 2015 - December 2015*

- 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.

SpaceX
Hawthorne, CA

Dynamics Intern — *May 2013 - November 2013*

- 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.

eSolar Inc.
Burbank, CA

Member of 6 person team — *Fall 2013 - Summer 2014*

- 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.

Skyline Eco-Adventures
Claremont, CA

Member of 5 person team — *Fall 2014 - Winter 2014*

- 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.

Modal Analysis of High Powered Rocket
Claremont, CA

Member of 5 person team — *Fall 2014 - Winter 2014*

- Determined in flight vibrations of rocket by designing and building electrical hardware to interface piezeoelectric strain sensors with Sparkfun Data Logger.
- Characterized modal behavior of rocket by writing Matlab code to find frequency, phase, and amplitude of strain sensors for 4 different rocket motors.
- Communicated experimental process, results, and findings in a 40 page report and a 30 minute presentation.

Leadership Experience

McGaw YMCA
Fremont, MI

Program Director — *February 2014 - October 2014*

- 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.

McGaw YMCA *Fremont, MI*

Program Coordinator *May 2012- September 2012*

- Facilitated 50 staff members every 2 weeks in programming and activity planning for 300 kids.
- Improved efficiency in paperwork by implementing online activity sign up for 1200 kids.
- Minimized setup time of on site trips by reorganizing equipment distribution.

Vail Resorts *Vail, CO*

Ski Instructor *Winter 2014, Winter 2015*

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

Skills

Programming Python(w/ Pandas, NumPy, SKLearn, Sphinx), C++, Matlab, R, JavaScript, HTML, CSS, LabView, System Verilog.

Certifications PSIA Level 3, NOLS Graduate