Eli J. **Regen**

San Francisco, CA

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Skills

Programming languages	Python(NumPy, SciPy, Matplotlib, Pandas, seaborn), R (ggplot2, dplyr), SQL
Data Science tools	Web Scraping , Data Cleaning/Exploration, Machine Learning (Scikit-Learn), Deep Learning (Keras, TensorFlow) , Natural Language Processing
Relevant Coursework	Linear Algebra, Vector Calculus, Ordinary and Partial Differential Equations, Differential Geometry, Mathematical Modeling, Computational Physics, General Relativity, Quantum Field Theory, Condensed Matter Physics
Other	Strong quantitative and writing skills developed through course of thesis

Experience

General Assembly — *San Francisco, CA*

Data Science Immersive student — *April.- Aug. 2019*

Completed a full-time data science immersive focused on real-world applications of data science principles and best practices, primarily with Python. Experience included data acquisition, data cleaning and wrangling, predictive modeling, and visualization strategies. Developed a portfolio of individually and collaboratively focused in-class projects, including:

- Predicted molecular atomization energies (regression) through ensemble learning
- Classified Reddit posts using Natural Language Processing
- Used feature engineering and linear regression to predict housing prices in Ames, Iowa

Research Assistant — *Chicago, Illinois*

Development of an Antimatter Gravity Interferometer, IIT — *May-July 2016*

- Developed code for calculating quantum corrections to muonium emission spectrum (Mathematica)
- Collaborated with team in designing a precision interferometer

Physics Tutor — *Annadale-on-Hudson, NY*

Bard College — *Sept.-Dec. 2014*

- Tutored fellow undergraduate physics majors in electromagnetic theory

Education

Illinois Institute of Technology — *Chicago, IL*

M.S. in Physics — *Dec. 2017*

- Trained in Particle Physics
- Thesis: "**Direct Probes of R-parity Violation at the LHC** "
- Used MadEvent and PYTHIA to produce Monte Carlo simulated particle events at the LHC under an R-parity violating SUSY model.
- Analyzed simulated data to show range of particle masses and coupling strengths that allow for top squark discovery under excluded limits

Bard College — *Annadale-on-Hudson, NY*

B.A. in Physics — *May. 2015*

- Thesis: "**Spinor Parallel Transport in Spacetime**"

Leadership

Pittsburgh, PA — *Apr. 2017*

University of Pittsburgh Phenomenology Symposia

- *Presented graduate thesis research to graduate students and physics professors from around the country*