

Solomon Klein

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Data Scientist

CORE COMPETENCIES

- Languages/Tools:** Git • Python(numpy, pandas, scikit-learn, BeautifulSoup) • SQL • Java
- Machine Learning:** Supervised and Unsupervised Learning/Classification • Regression Modeling
- Mathematics:** Abstract Algebra • Number Theory • Statistics • ODEs • PDES
- Geology:** Molecular Geochemistry • Satellite Imagery • Electron Microscopy • Geophysics

EXPERIENCE

- Metis Data Science** Fall 2020
Student
- Metis is an ACCET accredited 12 week immersive data science bootcamp focused on project oriented learning.
 - The core curriculum is centered around Python, statistics, supervised and unsupervised machine learning, exploratory data analysis, databases, and visualization techniques.
 - Completed five self-designed data science projects from conception to presentation; including data collection, data management, exploratory data analysis, modeling, and visualizations.
- Brown University**, Providence, RI Summer 2019
UTRA Research Intern
- Studied the chemistry of Gore Mountain Garnets to understand why they grow to an unusually large size.
 - Created thin sections transecting the reaction rim surrounding the garnets.
 - Used electron microscopy to create transects measuring the chemistry through the rim.
- Lawrence Berkeley National Laboratory**, Berkeley, CA Summer 2018
SULI Research Intern
- Taught myself the Crunchflow reactive-transport program entirely from tutorials.
 - Built a simulation of shale weathering using the Crunchflow in order to model water flow through shale.
 - Built a model that successfully emulated real-world shale weathering fronts.

DATA SCIENCE PROJECTS

- Modeling Baseball Leagues**
- Working independently over the summer of 2020, repeatedly modeled the 2016-2019 seasons to determine how often the estimated 'best team' was the actual winner.
 - **Tools:** Java
- MTA Transit Investigation**
- Used data from the New York City to measure high and low points throughout the week and recommend high-traffic stations.
 - Identified how high-traffic stations differed between weekends and weekdays.
 - **Tools:** Python, pandas, seaborn, matplotlib
- Predicting Movie Longevity**
- Using the scikit-learn toolkit, built a linear regression model to explain the enduring popularity of a movie using scraped data from Box Office Mojo.
 - **Tools:** Python, BeautifulSoup, scikit-learn, matplotlib
- Predicting Species Vulnerability**
- Using data provided by EOL.com's structured trait data, physical traits such as size, geographic range, and trophic niche, predicted a species' place on the IUCN red list using supervised learning.
 - **Tools:** Python, pandas, PostgreSQL, scikit-learn, matplotlib, Cypher Query Language
- Examining Authorial Voices in Torah**
- Applied Natural Language Processing techniques to the Torah, extracting key topics for classification.
 - **Tools:** Python, pandas, scikit-learn, imblearn, matplotlib
- Predicting El Niño Oscillations**
- Applied time-series methods to NOAA ocean data, predicting weather patterns up to one year in advance.

EDUCATION

Brown University • Providence, RI
Bachelor's in Math and Geology