

Address: 125 Falmouth Ct, Aptos, CA
Phone: (970) 631-9162

Email: joelfsilverman@gmail.com
GitHub: github.com/jf-silverman

LinkedIn: linkedin.com/in/jf-silverman
Portfolio: jf-silverman.github.io/

Joel F. Silverman

Data Analyst

Scientist seeking an opportunity to apply my analytical skills at an innovative software company. My breadth of experiences - from working at a SaaS startup, to modeling data for NASA, to leading biological analysis projects, to transforming data into insights for leaders - together make me a strong candidate.

SKILLS

Data Science & Statistics: Machine Learning (Supervised & Unsupervised), NLP, Deep Learning (Neural Networks), Data Visualization, Data Cleaning, Prediction, Inference, A/B Testing, Experimental Design.

Primary Programing Language: Python.

Python libraries: Scikit-learn, Pandas, NumPy, TensorFlow, Keras, Matplotlib, Seaborn, NLTK, Beautiful Soup.

BI Tools: AWS QuickSight, Tableau, Mode Analytics

Other Languages & Software: R Programming Language, SAS, SQL (Postgres, MySQL), Bash, Google Cloud Platform (Google Colab & BigQuery), Streamlit, PySpark, AWS EC2, Git/GitHub, ArcGIS, Access, Excel, HTML.

PROJECTS

Predicting Energy Demand with Time Series Analysis: Developed models predicting near-term energy demand for Texas energy (96% accuracy). Results allow customers to save costs and move toward renewables.

AI to Select High Quality Crowd-sourced Photos: Trained convolutional neural networks to select best images in galleries to increase customer views. Compared from-scratch modeling to transfer-learning technique using transformers to obtain best results.

Real Talk vs. Chatbots Using Natural Language Processing (NLP): Use NLP to differentiate human forum discussion from GPT2 chatbots that mimic such forums; results can inform fraud detection. Achieved 90% accuracy.

EXPERIENCE

Business Data Analyst - WeaveGrid, San Francisco, CA

June 2022 – August 2022

- Worked as a team member of a software development startup engaged in EV, power systems, and climate solutions. Contributed to thought leadership in shaping EV driver charging habits in ways that lower carbon emissions and improve utility grid stability.
- Gathered data from many sources and used complexed SQL queries to build interactive dashboards showcasing market segmentation using filters, charts, and maps in a fast-paced environment. Worked closely with the Utility Client Solutions and EV Driver teams to translate important business questions about large datasets into specific analytical tasks, perform quality assurance tests, produce engaging visuals, and share creative solutions. Demonstrated critical thinking, problem-solving skills, and initiative in data visualization.
- Reviewed development of predictive models, including the developing/formatting of inputs. Worked with data science, data engineering, and software engineering teams through Agile processes for anomaly detection, resolving technical errors, and working as a team player.

Data Scientist Fellow - General Assembly, Aptos, CA (Remote)

November 2021 - March 2022

- Completed 12-week, 480-hour live-taught data science instruction using Python, SQL, and cloud ML tools, including 6 projects and 30+ assignments using Python programming to explore many machine learning techniques, algorithms, and datasets. Statistical methods included regression, classification, neural networks, NLP, PCA, cluster analysis, Bayesian statistics, random forest, and time series analysis. Assignments emphasized business cases.
- Scraped website data using APIs, cleaned data, conducted data visualization, and engineered variables. Built pipelines to automate data modeling processes. Utilized Git and GitHub for version control in all work. Applied data engineering

and computer science principles. Utilized extract, transform, load (ETL) processes, including SQL queries of relational databases.

- Researched ML paradigms, deep learning frameworks, and ML infrastructure (CI/CD & MLOps).

Resource Specialist - *US Forest Service, Pinecrest, CA*

September 2014 - November 2021

- Provided decision makers with analytical support using datasets in MS Excel, ArcGIS, and custom databases to monitor standards and trends. Created tables, charts, maps, and figures for reporting and planning. Presented to various public, partner, and stakeholder audiences, where judicious written and verbal communication skills were critical.
- Developed a relational database (DB) and adapted architecture for improved integrity and performance. Cleaned records, analyzed data, and generated statistics and reports which leveraged customer data to provide insights to management regarding changing use patterns. Solved problems both technical and strategic.
- Designed and developed a self-serve online customer request system to replace a staff-intensive paper system, saving approx. 1500 staff hours annually.
- Produced time-sensitive mapping analysis & data products for incident command teams during wildfires and obtained security clearance for sensitive data access and law enforcement responsibilities.

EDUCATION

Master of Science - *Colorado State University, Fort Collins, CO*

- Awarded competitive NASA Graduate Research Assistantship building models with a team of NASA and National Park Service scientists. Conducted statistical analysis using statistical software (R, SAS) and other software (ArcGIS, Excel).
- Developed study design, tested inferences, and built predictive models using machine learning. Implemented data collection, the cleaning / aggregation of data sets, and data warehouse design and development using relational data models.
- Statistics Coursework: Data Design & Data Analysis for Researchers I, Data Design & Data Analysis for Researchers II, Spatial Statistics Data Modeling. Other Coursework: GIS Applications for Natural Res. Mgmt, Concepts in GIS, Ecology of Disturbed Lands, and Fire Ecology.
- Thesis: developed statistical models of species distributions using remote-sensing data and engineering variables. Presented findings (oral and written) at conferences, symposia, and workshops.
- Worked primarily in field of Applied Statistics, earning an MS in Forest Sciences from the College of Natural Resources.

CERTIFICATES

- **Data Science Immersive – *General Assembly***, 12-weeks, full-time, 480 class hours; 600 hours total.
- **Data Analysis in SQL & Python (Various Data Analysis Courses) – *DataCamp***, 50+ hours.