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Joel F. Silverman

As a technical specialist with an M.S. degree, a bootcamp certificate, and experience interning at a SaaS tech startup, I'm working on transferring my skills to the IT sector at a company that values communication, openness, and inclusion. My background as a graduate research assistant for NASA and my work experience stretching lean resources through applying analysis and automation make me a strong candidate for data analysis and data science positions.

SKILLS

- **Data Science:** Machine Learning (Supervised & Unsupervised), NLP, Data Visualization, Data Cleaning, Statistical Inference.
- **Primary Programing Language:** Python.
- **Python libraries:** Scikit-learn, Pandas, NumPy, TensorFlow, Keras, Matplotlib, NLTK, Beautiful Soup.
- **Other Languages & Software:** R Programming Language, SAS, SQL (Postgres & MySQL), Bash, Google Cloud Platform (Google Colab & BigQuery), Streamlit, PySpark, AWS EC2, Git/GitHub, Tableau, HTML, ArcGIS, Access, Excel.

PROJECTS

Predicting Energy Demand with Time Series Analysis: Led visualization of data in a small group project developing time-series models. Models predict near-term energy demand for Texas energy (96% accuracy). Results allow customers to save costs and move toward renewables.

A Neural Net for Improved Yelp Photo Galleries: Trained a convolutional neural net to select high-quality Yelp photos for the top of each restaurant's photo gallery. Used both from-scratch and transfer-learning methods.

Real Talk vs. Chatbots Using Natural Language Processing (NLP): Use NLP to differentiate human forum-based discussion from GPT2 chatbots that were trained to mimic forum-based discussion. Achieved 90% accuracy.

EXPERIENCE

Business Analytics Intern - 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.
- Gathered data from a variety of sources, performed complexed SQL queries, and used results to build interactive dashboards to show market segmentation using filters, charts, and choropleth maps. Completed all products on time.
- Worked closely with the Utility Client Solutions and EV Driver teams to meet product deadlines, produce engaging visuals, perform quality assurance, and share creative solutions.

- Worked with software engineering and other team to understand common goals; also reviewed current machine learning product development.
- Contributed to thought leadership in shaping EV driver charging habits in ways that lower carbon emissions and improve utility grid stability.
- Participated in software engineering Agile processes such as scrums, sprint reviews, and creating tickets.

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

November 2021 - March 2022

- Completed 12-week, 480-hour live data science instruction using Python, SQL, and cloud ML tools.
- Completed 6 projects and 30+ assignments using Python programming to explore a variety of machine learning techniques, algorithms, and data sets. Statistical methods included regression, classification, neural networks, 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 modeling processes. Utilized Git and GitHub for version control in all work.
- Learned data engineering principles. Practiced extract, transform, load (ETL) processes, including SQL queries of databases.

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 results to public, partner, and stakeholder audiences.
- Developed a relational database and adapted architecture for improved integrity and performance.
- Established an end-to-end online customer permit system, which provided data quality assurance and saved 1000+ staff hours annually.

EDUCATION

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

- Awarded NASA Graduate Research Assistantship building models with scientists from NASA and the National Park Service. Conducted statistical analysis using statistical packages (R Programming Language, SAS, Excel), for study design development, prediction, and hypothesis testing. Tested new methods for resolving chronology and spatial autocorrelation. Implemented data collection and cleaning of complex data sets.
- Thesis: developed statistical models of species distributions using remote-sensing data. Presented findings (oral and written) at conferences, symposia, and workshops. Worked primarily in Applied Statistics, earning an MS in Forest Sciences through the College of Natural Resources.
- Coursework: Spatial Statistics & Modeling, Statistics: Data Design for Experiments, Statistics: Data Analysis), and GIS Analysis.

CERTIFICATES

- **Data Science Immersive** – *General Assembly*, 12-weeks, full-time, 2022
- **Data Analysis in SQL & Python (Various Courses)** – *DataCamp*, 50 hours, 202212-weeks, full-time, 2022