Hanieh Haeri

925-768-0299 | hhaeri0911@gmail.com | Alamo, CA94507
https://hhaeri.github.io/portfolio/ | https://www.linkedin.com/in/hanieh-haeri-9319b024/

PROFESSIONAL SUMMARY

Results-oriented Data Scientist with a decade of experience in modeling, statistical analysis, and machine learning. Proven track record in delivering value-driven solutions to complex business challenges, leveraging advanced skills to generate actionable insights and enhance decision-making.

EXPERIENCE

AI/ML Consultant (Freelancer) **2023 - Present**

- Interpretable AI for Medical Imaging Data
  - Enhanced a Generative model using a Variational Autoencoder (VAE) architecture to provide interpretable AI-driven diagnostics for medical imaging while collaborating with UCSF.
  - Identified user needs through feedback from medical practitioners, focusing on a simple, code-free tool to improve model understanding and build trust.
  - Developed a Streamlit app prototype for visual interaction with the VAE model's latent space, boosting user engagement and confidence in the model's predictions.
- Semantic Segmentation for Extracting Geologic Features from Historic Topographic Maps
  - Developed and trained a UNet-based Semantic Segmentation model in TensorFlow, reducing manual feature extraction efforts by 54% for large-scale geologic data processing.
  - Delivered a scalable, high-efficiency AI-driven solution that supported the business expansion goals and long-term ROI.
- Causal Machine Learning for Coupon Campaign Optimization
  - Leveraged Double/Debiased Machine Learning (DML) to identify high-impact customer segments for coupon targeting, using observational data eliminating need for costly A/B testing experiments
  - Improved pricing and promotion campaign ROI by 48% versus traditional ML by accurately isolating causal effects from historical data

Data Scientist / Engineer **2014 - 2022**
Montgomery & Associates , Oakland, CA

- Led the integration of Python and SQL workflows to eliminate data processing bottlenecks, reducing processing time by 60% and empowering teams to make faster, data-driven decisions.
- Acquired, cleaned, and transformed data from diverse sources, addressing quality issues to ensure reliability and delivering analytical insights aligned with clients' strategic goals and operational needs.
- Developed ARIMA and LSTM models to forecast groundwater level trends, enabling sustainable, data-driven water resource management.
- Designed and implemented statistical and machine learning models to solve complex business challenges.
- Created visually compelling dashboards and reports to effectively communicate insights and key metrics to clients, driving actionable outcomes.
- Collaborated with cross-functional teams to translate data-driven insights into actionable recommendations aligned with clients' strategic goals and operational needs.

SKILLS

Programming Languages: Python, MATLAB, Spark, SQL
Machine/Deep Learning :Scikit-Learn, PyTorch, TensorFlow, Keras
Statistical Data Analysis, Hypothesis testing & Causal Inference: SciPy, Statsmodels, DoubleML, EconML
Data Wrangling & Visualization : SQL, Numpy, Pandas, Matplotlib, Tableau
Natural Language Processing : spaCy, NLTK, regex, LLM
Distributed Version Control: Git
Time-series analysis: ARIMA, LSTM

EDUCATION

Ph.D., Engineering, University of California, Davis **2011**
B.S., Engineering, Sharif University of Technology **2004**

CERTIFICATIONS

- **Large Language Models Professional Certificate**, Databricks **2024**
- **Creating Dashboards and Storytelling with Tableau**, UCDavis **2024**
- **Interpreting Machine Learning Models,** Uplimit **2023**
- **Deep Learning Specialization**, DeepLearning.AI **2023**
- **Data Scientist Certification,** The Data Incubator **2022**