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US Citizen

Kian Mohseni

Data Scientist

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Technical Skills

Programming: Python, SQL, R, MATLAB
Libraries: Pandas, NumPy, Matplotlib, Seaborn, Scikit-learn, SciPy, PyTorch, TensorFlow, nltk, shiny, ggplot2
AI/ML: Supervised/Unsupervised/Reinforcement Learning, LLM, GenAI, MLOps, A/B Testing, Time Series, Causal Inference
Tools: Git, Jupyter, AWS, VSCode, Node.js, Tableau, Power BI, SPSS, ArcGIS, PyCharm, LaTeX, DataBricks, BigQuery
Methodologies: Customer Relationship Management, Agile, Product Lifecycle, RFP, Failure Modes & Effects, Fault Tree

Experience

Product Engineer • Design & Sustaining Team (Military Flight Controls Division) ***Jun 2022 - Sep 2024***
Parker Aerospace Irvine, CA

- Achieved executive buy-in after implementing an ESG predictive analytics tool for global waste reduction initiatives using VBA, resulting in $3.4M annual savings through PPE recycling optimization, while reducing CO_2 emissions by 630 metric tons and energy consumption by 28M kWh across all US sites.
- Led engineering support for F-35 Electrohydrostatic Actuator program ($150M annual gross revenue), owning design specifications, drawings, test procedures, and RFP's while driving continuous improvement engineering changes.
- Resolved critical Rudder Actuator leakage issue threatening $54M annual revenue by leading root cause of failure investigation in a cross-functional team, executing design of experiments, and presenting statistical analyses to key stakeholders; coordinated with suppliers and customers to implement solution and prevent production line stoppages.
- Researched use of GenAI knowledge database to capture expertise from retiring workforce, leveraging custom LLM's.

Projects

Flight Status Prediction • Python ML Classification & Regression ***Mar 2025***

- Built end-to-end pipeline of binary classification and regression models using 20M+ historical flight records and NOAA weather data to predict delay occurrence and duration.
- Engineered temporal, geographic, and weather-derived features, including cyclical timestamps, seasonal peaks, and prior delay patterns, boosting AUC to 0.73 and reducing RMSE to 71.6 mins.
- Benchmarked Logistic, SGD, MLP, and Histogram-based Gradient Boosting models, revealing tree-based methods as optimal for classification and regression across highly imbalanced dataset.

Predicting Hospital Readmission from Diabetes Data • Python ML Classification ***Dec 2024***

- Designed predictive features, including hospital interaction scores and chronic condition counts, boosting model interpretability and highlighting patients with high readmission risks.
- Constructed the Synthetic Minority Oversampling Technique to address severe class imbalance, improving recall for high-risk cases while maintaining model stability.
- Evaluated an ensemble Weighted Voting Classifier, resulting in a AUC-ROC score of 0.62.

Steam Gaming Review Ratings • Python ML Recommendation System ***Nov 2024***

- Engineered predictive features, including review text length, log-transformed hours played, and time-weighted engagement metrics, improving model stability and interpretability.
- Implemented user-to-user and item-to-item collaborative filtering, leveraging Jaccard Similarity to improve game recommendations based on shared user preferences.
- Built a Linear Regression model to predict playtime based on review characteristics, reducing Mean Squared Error (MSE) by 22% after removing the top 10% of outliers.

COVID-19 Spatial SIR Model • MATLAB Dimensionality Reduction & Time Series ***Dec 2020***

- Utilized PCA algorithm to reduce international COVID-19 infection data from 6 to 2 dimensions.
- Employed the Runge-Kutta algorithm to visualize pandemic progression using 2D animations and Time-Series plots.
- Analyzed the impact of spatial interactions on infection rates in a 50x75 grid, demonstrating that increased contact rates led to faster outbreaks, with green pixels denoting recovered individuals outpacing red infected pixels after 150seconds.

Education

University of California, San Diego (UCSD) ***Sep 2023 - Mar 2025***

- Master of Science, Data Science (GPA: 4.0/4.0)

University of California, Los Angeles (UCLA) ***Sep 2018 - Jun 2022***

- Bachelor of Science, Mechanical Engineering (Men's Soccer Student Athlete)