DAVID MACIAS

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PROFILE

Experienced with numerical analysis, algorithm development, data analysis, modeling and visualization. I have done practical work with statistical analysis to aid in decision-making strategies and implementation. I also have experience designing and maintaining scalable data pipelines using Azure, Apache Spark and Python. I am solution-oriented and a versatile contributor working effectively both independently and as a team collaborator. I am eager to both build on and put my knowledge and experience to work.

EXPERIENCE

Data Analyst El Paso County, El Paso, TX 04/2024 - Present

- Improved the efficiency of data collection and reporting, resulting in an ROI of $1,000,000.
- Created and maintain data pipelines that refined and stored data to be actively used for analysis and reporting County wide.
- Updated County data warehousing techniques with data recall and compartmentalization, resulting in a 100% increase in usage by non-technical staff members
- Utilized Web APIs to extract and populate training data, ultimately increasing data transparency and accessibility for instructional purposes.

Graduate Researcher New Mexico State University, Las Cruces, NM 02/2022 - 05/2024

- Managed data cleaning, visualization, and custom model development across diverse datasets, focusing on algorithmic solutions for complex scenarios.
- Utilized advanced modeling techniques to select features, build classifiers, and optimize performance metrics, contributing to innovative research initiatives.
- Developed and implemented various machine learning algorithms using Python and libraries scikit-learn and TensorFlow to achieve a successful predictive model.
- Evaluated the performance of the classification model using metrics such as accuracy, precision, recall, and F1-score.
- Created visualizations of the classified data using matplotlib and PowerBI.

EDUCATION

M.S. Data Analytics New Mexico State University 2022-2024

- Graduated summa cum laude - 3.7+ GPA
- Prominent coursework: **Machine Learning for Algorithm Development**
- Led research team to develop and deploy predictive model for astronomical object classification
- Completed time series analysis to predict drought and precipitation with 95% accuracy.

B.S. Computational Physics University of Texas at El Paso 2016-2020

- Prominent coursework: **Numerical Analysis, Mathematical Methods, Computational Modeling**

PROJECTS

Employee Workload Machine Learning Optimization

- Implemented time series analysis for ticketing system to optimize assignment strategy and functionality.
- Lowered ticket completion time by 150%
- Increased overall client satisfaction score and associated KPIs

PowerApps Data Pipeline and Officer Assignment

- Create PowerApp to input, concatenate, clean and analyze data.
- Used Naive Bayes to predict high demand and optimal officer allocation.
- Prepared prescriptive analysis for weekly and monthly reports to aid in daily decision making.

Tech Stack & Skills

Data Storage: Azure, databricks, MySQL
Data Visualization: Tableau, PowerBI
Data Analysis: Excel, Python, R, SPSS, Apache Spark
Notebooks: Deepnote, Jupyter
Libraries: scikit-learn, tensorflow, sci-py, numpy, pandas, matplotlib, pytorch
Statistical Analysis: Regression, Time-series forecasting, A/B Testing, Feature Scaling, Machine Learning