Richard Martin Flores

Lead Data Analyst @ NASA

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SUMMARY

Currently a Lead Data Analyst at NASA Headquarters within the AETC Portfolio Office where I play a role in advancing the Aeronautics Mission Directorate to optimize and augment Wind Tunnel Research and Test capabilities. Concurrently, I am pursuing a PhD in Data Science, focused on physics-driven research in cooperative game theory machine learning. My academic credentials are complemented by two master's degrees and over a decade of industry experience in data analytics and comprehensive front-end and back-end system design.

EXPERIENCE

NASA – Glenn Research Center *Jan 2024 – Present*

Lead Data Analyst Intern

• Designed and implemented a database schema for Wind Tunnel test scheduling, achieving an increase in data reliability and halving manual data entry efforts.

• Led the development and maintenance of an ETL pipeline for the scheduling system, improving accuracy and reducing delays.

• Created a user-focused front-end for scheduling, with advanced authentication and dynamic adjustments, enhancing user experience, efficiency, and security.

• Developed an SQL server backend with ACID transactions for scheduling and login, cutting downtime and boosting response times.

NASA – Glenn Research Center *Aug 2023 – Dec 2023*

Data Analyst Intern

• Development of comprehensive analyses and visualizations, utilizing performance and value metrics to assess the operational efficiency of NASA's National Wind Tunnel facilities, significantly enhancing strategic decision-making processes.

• Set the gold standard in front-end design of performance and value attributes with Plotly and Dash, establishing a benchmark with real-time data visualizations sourced from Google BigQuery and Firestore databases.

• Authored critical Python-based functionalities to facilitate real-time interactions with charts and tables, along with data export capabilities, showcasing NASA's commitment and capability for digital transformation.

EDUCATION

University of Texas at El Paso
PhD Data Science
August 2024 – August 2028

Western Governors University
MBA
May 2023 – July 2024

Western Governors University
M.S. Data Analytics
June 2021 - May 2022

University of Texas at El Paso
B.S. Physics
Aug 2015 - Dec 2019

PROFESSIONAL SKILLS

Competencies: ML Algorithms, Deep Learning Frameworks, Statistical Analysis, Data Engineering, Feature Engineering, Predictive Analytics, Data Visualization, Big Data, NLP, Database Design and Management, Cloud Computing (AWS, GCP), Continuous Integration/ Continuous Deployment (CI/CD) Practices

Tools: Jupyter, Git, Docker, Kubernetes, Apache Airflow, Tableau, Power BI, Dash, Plotly

Programming: Python (Pandas, NumPy, Scikit-Learn, TensorFlow, PyTorch, Matplotlib, Seaborn), R, Scala, SQL, HTML5, CSS3, JavaScript, Bash Scripting, RESTful API Development

Anvl *Feb 2023 – Sept 2023*

Data Analyst

• Developed ETL processes utilizing DynamoDB, MySQL, and Elasticsearch for data extraction from diverse sources.

• Authored Python scripts for data extraction and data preparation, enabling efficient reporting and analysis.

• Oversaw AWS Redshift, maintaining peak performance and scalability in data warehousing.

• Performed data analysis via Power BI and Tableau, helping stakeholders identify areas of opportunity for worker safety.

• Demonstrated agility in adapting to the fast-paced startup landscape, ensuring data analysis aligned with market and client requirements.

Data Glacier *Nov 2022 – Feb 2023*

Data Science Internship

• Spearheaded end-to-end data science projects, encompassing proof of concept creation and data product deployment.

• Employed machine learning methodologies and tools like Scikit-Learn and TensorFlow for feature selection, classifier construction, and optimization.

• Collaborated with cross-functional teams to conduct exploratory data analysis and derive actionable insights.

Twitter *May 2020 – Oct 2022*

Data Analyst

• Developed scalable code with R and Python incorporating R technologies (Shiny, dplyr, ggplot2) and using BigQuery, Presto, and Vertica for data processing.

• Performed analyses in various domains using Tableau, Power BI, Google Analytics, and R packages, extracting insights from complex datasets.

• Led an NLP and sentiment analysis project for hate speech detection, incorporating Heroku and Docker for deployment and containerization.

University of Texas El Paso *Jan 2019 – Dec 2019*

Research Assistant

• Undertook research in biphotonic imaging via two-photon microscopy for nanoparticle visualization, leveraging ImageJ and MATLAB for image processing and analysis.

• Examined data employing Python and libraries like Pandas, NumPy, and Sklearn, while crafting SQL queries for data extraction and manipulation from databases.

ACADEMIC SOCIETIES

Presidential Member - Sigma Alpha Phi
President - Society of Physics Students
Member - Sigma Gamma Epsilon
Member - Latinos in Science and Engineering
Member - Machine Learning Social Club
Member - Club Zero Mathematics

ONLINE COURSES

DataCamp

- Data Scientist with Python: Deep Learning, NLP, and Time Series Analysis
- Data Engineer with Python: Big Data Technologies, ETL Pipelines, and Cloud Services
- Data Analyst in SQL: Performance Tuning, Analytics Functions, and Visualization
- Machine Learning Scientist: Advanced Predictive Models

Udemy

- Complete 2023 Web Development Bootcamp: HTML, CSS, JS, Node.js, and React
- Complete SQL Bootcamp 2022: Query Optimization, Data Warehousing, and PostgreSQL
- Complete Python Pro Bootcamp 2023: AI and Machine Learning Applications
- Tableau A to Z 2022: Visual Analytics and Dashboarding

CERTIFICATIONS

Dataiku Core Designer Jan 2024
Dataiku ML Practitioner Jan 2024

PERSONAL WEBSITE

https://richardflores.me/

GitHub

github.com/DataDaimon