Daniel Duarte

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PROFESSIONAL SUMMARY

Data Scientist and Machine Learning Engineer with a Master's in Computer Science and hands-on operational experience within the US healthcare domain. Proficient in Python, SQL, and R, with a proven track record of collecting, pre-processing, and analyzing complex datasets to build predictive models. Combines strong statistical analysis skills with deep knowledge of clinical regulatory environments (FDA/HIPAA adherence), excelling at translating technical data insights into actionable reports for cross-functional business stakeholders.

EDUCATION

Master of Science in Computer Science — **Aug. 2024 – Expected Jan. 2027**
Georgia Institute of Technology — *Atlanta, GA*
Concentration: Machine Learning and Artificial Intelligence

Bachelor of Science in Biomedical Engineering — **Jan. 2018 – Dec. 2022**
Julio Garavito School of Engineering and Rosario University — *Bogotá, Colombia*

TECHNICAL SKILLS

Languages & Core: Python, SQL, R, Git, REST APIs, Cloud Platform Concepts (AWS/Azure)
Data Science & Machine Learning: Exploratory Data Analysis (EDA), Statistical Modeling, Classification, Regression, Clustering, NLP, Data Pre-processing
Frameworks & Libraries: Pandas, NumPy, Scikit-learn, PyTorch, TensorFlow, Flask
Analytics & Domain: Data Visualization (Matplotlib, Tableau/Power BI awareness), US Healthcare Data Context, Regulatory Compliance, Technical Reporting

DATA SCIENCE & MACHINE LEARNING PROJECTS

Healthcare AI: Diagnostic Image & Signal Processing (Python, PyTorch, EDA)

- Developed complex signal processing and machine learning algorithms to evaluate medical imagery, specifically focused on detecting COVID-19 anomalies in chest X-rays.
- Performed exploratory data analysis (EDA) and applied advanced data pre-processing techniques to clinical datasets, significantly improving the diagnostic reliability and accuracy of the model.
- Navigated strict data formatting requirements akin to clinical privacy and compliance standards.

Anomaly & Fraud Detection Models (Python, SQL, Machine Learning)

- Designed, tested, and validated statistical machine learning models to detect outliers and anomalies in structured and unstructured time-series data datasets.
- Utilized clustering algorithms, autoencoders, and statistical classification methods to pre-process datasets and extract actionable business insights.
- Prepared documentation and visualized exploratory data patterns using Matplotlib and Pandas to effectively communicate analytical findings to technical stakeholders.

Automated Tracking Analytics (Computer Vision & MLOps)

- Collaborated with a cross-functional team to integrate and pre-process dynamic video data, engineering a tracking pipeline using PyTorch.
- Established an automated ETL workflow, demonstrating the ability to handle data collection, integration, and validation for deployment.

PROFESSIONAL EXPERIENCE

Technical Systems Specialist (Healthcare Domain) — **Dec. 2022 – Aug. 2024**
Medical Maintenance — *Norcross, GA*

- **Clinical Data & Compliance Adherence:** Operated extensively within highly regulated US clinical settings (dialysis, endoscopy, and research facilities), ensuring all testing procedures, documentation, and technical interventions strictly adhered to FDA and facility compliance standards (handling sensitive operational data).
- **Stakeholder Collaboration & Reporting:** Evaluated complex facility requirements and prepared detailed technical reports and briefings. Effectively translated diagnostic test results and system analytics into actionable recommendations for clients, clinicians, and business stakeholders.
- **Quality Assurance & Testing:** Managed rigorous testing schedules and routine calibrations for mission-critical clinical systems. Generated complete, timely, and accurate documentation logs to resolve issues and maintain enterprise quality standards.
- **Cross-Functional Problem Solving:** Diagnosed technical anomalies and offered direct operational support to cross-functional teams, acting as a bridge between technical operations and end-user clinical staff.

CERTIFICATIONS

- **Applications of AI for Anomaly Detection** – NVIDIA
- **Generative AI with Diffusion Models** – NVIDIA
- **Fundamentals of Deep Learning** – NVIDIA

LANGUAGES

Spanish: Native