Maximilliano Alvarado

MaxAlvarado401@gmail.com | US: +1 (832) 803-8061 | Houston, TX | 🐙 | 💼 | 🌐

Education

B.S. **Mathematics** in **Data Science**, **Computer Science** Minor - University of Houston (May 2023)

Work

Data Analyst - Group 1 Automotive (June 2023 - Present)
- **Extract, clean, transform, and analyze multi-departmental data** using Qlik and SQL to identify trends and optimize operations.
- Designed **executive-level dashboards and reports**, delivering data-driven recommendations to stakeholders and leadership.
- Contributed to the **development of ~40%** of all active Qlik dashboards; **upgraded 85%** and **optimized 55%** for performance and efficiency.
- Awarded **Quarterly Productivity Award six consecutive times** for outstanding performance and consistency.

Inventory Data Specialist - America Auto and Truck Salvage (May 2019 - June 2023)
- Experienced in working with a comprehensive **inventory management software** that helps navigate through a **database** that matches car parts to interchange lines and other local businesses.
- **Managed data** with hundreds of car parts, developed inventory **data analysis reports with Excel**, developed barcodes, and provided customer service.

Projects

Predictive Maintenance using Wide & Deep Neural Network
- Built a **deep learning classifier** to detect machine failures from sensor data using a **custom Wide & Deep ANN.**
- Implemented **TensorBoard** logging, **L1/L2** regularization, **Batch Normalization**, and **early stopping.**
- Achieved **98.7%** validation accuracy and tuned hyperparameters using **SciKeras** + **RandomizedSearchCV.**

Used Car Price Estimator with Random Forest Regression
- Developed a **regression pipeline** to predict vehicle prices, including **data preprocessing**, **imputation**, **encoding**, and **scaling**.
- Performed **hyperparameter tuning** on a **Random Forest** model using cross-validation.
- Deployed the model via an **interactive Streamlit app** for real-time predictions.

Traffic Sign Classification using Convolutional Neural Networks
- Designed and trained a custom **CNN** using **TensorFlow/Keras** to classify 43 German traffic sign categories (**GTSRB dataset**).
- Performed **image preprocessing**, **one-hot label encoding**, and **model tuning** with **SciKeras** and **TensorBoard**.
- Optimized architecture using **LeakyReLU**, **Dropout**, and **ReduceLROnPlateau** callbacks.

AldineAmerica.com – Full-Stack Inventory Management System
- Developed and deployed a production-ready **full-stack web app** using **Angular**, **ASP.NET Web API**, and **SQL Server** for a local auto salvage business.
- Implemented secure **admin/visitor dashboards**, **CRUD operations**, and a **photo upload API**.
- Integrated **Google Maps API** and deployed using the **Plesk Control Panel**.

Skills

- *Languages:* **Python**, **SQL**, **R**, C++, C#, HTML/CSS, Java, TypeScript, MATLAB
- *Libraries/Frameworks:* **Pandas**, NumPy, **Scikit-Learn**, **TensorFlow**, Keras
- *Tools/Platforms:* **Qlik**, **Power BI**, Tableau, **Git**, ASP.NET, Angular, Bootstrap, Streamlit, Microsoft Office

Certificates

- IBM **Data Science Professional**
- DeepLearning.AI **TensorFlow Developer**
- DeepLearning.AI **Machine Learning Specialization** (In Progress)

Coursework

- **Data Science & Machine Learning,** Database Management Systems, Programming & Data Structures, **Data Science & Statistical Learning**, Data Structures & Algorithms, **Differential Equations**, Software Design

Languages

- **Fluent** in both English & Spanish (Native Speaker)