CARLOS PALOMARES

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SAMPLE PROJECTS AS TECHNOLOGY CONSULTANT

Predictive Maintenance for Public Transport - Data Science for Hamburg's Transport Association
Tech Stack: AWS Sagemaker & S3, Python, TensorFlow, Autoencoders

- Increased classification of faulty components to 94% by training Deep Learning (LSTM) algorithm.
- Created training, serving, and monitoring pipeline for the above-described model in AWS infrastructure.

Cloud Provider Migration & Architecting - Platform Engineering for MRO Aviation Industry
Tech Stack: GCP Networking, Composer, GCS, GKE, Python, Terraform, OpenShift, Helm Charts, Kubernetes

- Architected a full scale data workbench in Google Cloud Platform, including networking, data pipelines, CI/CD, and data warehousing with Terraform as Infrastructure as Code (IaC).
- Deployed enterprise data migration applications on OpenShift using Helm charts for their management at scale.
- Designed the data warehouses for 4 business units following Google BigQuery best practices ensuring cost-effective querying.

Cloud Provider Migration & Data Warehousing - Data Engineering for E-Marketing Company
Tech Stack: GCP BigQuery, Composer, GCS, GKE, Python, Terraform

- Created and deployed the data warehousing architecture in GCP BigQuery as infrastructure as code.
- Developed the ETL Pipeline for migrating and over 1500 E-Marketing campaigns.
- Migrated and optimized the data reporting infrastructure from AWS to Google Cloud Platform in under 6 weeks.

Cloud Provider Migration & Code Optimization - Data Engineering for Retail & E-Commerce
Tech Stack: GCP BigQuery, DataProc, PySpark, Jenkins, FB Prophet

- Reduced code execution time by over 70% by leveraging the capabilities of Google Cloud Platform's, specifically Dataproc's parallel (Spark) computing and efficient resource allocation.
- Designed and implemented time-series analysis algorithms to predict and detect non-linear trends.
- Reduced faulty pipeline building and enhanced code quality by generating code testing procedures.

Predictive Maintenance for Aircraft Structures - Data Science for MRO Aviation Industry
Tech Stack: Python, PySpark, Apache Stack, Jenkins, SKlearn, Tableau

- Designed and implemented ML algorithms (Kalman Filtering, Bayesian Changepoint Detection, SVM, Deep Learning) for predicting airplane maintenance needs at least 7 days in advance.
- Guided customers in their onboarding journey; from research and data analysis to use case rollout.
- Optimized customer onboarding process to the predictive maintenance platform by 75% by implementing generalized Python Classes.