

# ALEXIS ALEJANDRO MARTÍNEZ SUÁREZ

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## PERFIL

Last-year Computer Engineering student specializing in Data Science. Passionate about building data and software solutions, with hands-on experience in Data Engineering, MLOps, and end-to-end system development using Python, SQL, GCP, and NestJS. I have applied my skills in academic projects and a real-world operational improvement case for PepsiCo Chile's fleet. Seeking a professional internship starting January 2026 to contribute to data or backend development teams.

## TECNOLOGÍAS Y HERRAMIENTAS

- **Languages & Frameworks:** Python ([pandas](#), [scikit-learn](#), [Flask](#)), SQL, JavaScript/TypeScript ([NestJS](#))
- **Data & ML:** GCP (BigQuery, Pub/Sub), MLflow, TensorFlow/Keras, PyTorch
- **Databases & Cloud:** PostgreSQL, Redis, MinIO, Docker, GitHub Actions
- **Development Tools:** Git/GitHub, Jupyter/Colab, Power BI, Matplotlib, Linux CLI

**Methodologies & Skills:** Teamwork (Gitflow/PRs), technical communication, microservices architecture, API design, results oriented.

**Professional Focus:** GCP data architectures, real-time data pipelines (Pub/Sub), lightweight MLOps (monitoring/drift), ETL and Data Warehousing optimization (BigQuery), model serving with FastAPI.

## KEY PROJECTS

- **CRM for Fleet Workshop Management - PepsiCo Chile (Capstone)** - Web platform developed for a real use case, replacing manual processes and improving operational traceability.
  - Led backend development with NestJS, implementing JWT authentication, role-based access control, state management, and storage with MinIO (S3).
  - Integrated PostgreSQL, Redis for queues (BullMQ), and Socket.IO for real-time notifications.
  - Deployed using Docker Compose.
  - Outcome: Centralized processes, reduced errors, and improved inventory control.
  - Repo: [github.com/alex-msu/crm-talleres-flota](https://github.com/alex-msu/crm-talleres-flota)
- **Anomaly Detection in HDFS (block-level)** - AUC-PR 0.755 | ROC-AUC 0.891 | F1 0.747 (*posrate 3%*). Streaming pipeline using HashingVectorizer + SGD + Platt scaling; CI and demo in Colab. Outcome: Early alerts for anomalous blocks.
  - Repo: [github.com/alex-msu/anomaly-log-detector](https://github.com/alex-msu/anomaly-log-detector)
- **Bank Churn Prediction with MLOps** - F1 and recall  $\geq 0.96$ . Modular pipeline (cleaning, features, encoding, scaling, RF) with metric/artifact/version tracking in MLflow. Outcome: Prioritization of at-risk customers.
  - Repo: [github.com/alex-msu/churn-predictor-mlops](https://github.com/alex-msu/churn-predictor-mlops)
- **Rain Prediction + Web App** - Accuracy 88%. Classification with scikit-learn and Flask app for non-technical users. Outcome: Support for daily operational decisions.
  - Repo: [github.com/alex-msu/rain-predictor-webapp](https://github.com/alex-msu/rain-predictor-webapp)

## EDUCACIÓN

DUOC UC – Plaza Oeste - Computer Engineering (Data Science major) | Mar 2022 – Present (final semester)

Previous education: Business Administration Technician (HR focus), graduated 2020

## CERTIFICACIONES

TOEIC 980/990 (C1, ETS, dic 2024 - dic 2026)

Google Cloud Platform (GCP) - Skill Badges (2025):

- Engineer Data for Predictive Modeling with BigQuery ML
- Create ML Models with BigQuery ML
- Prepare Data for ML APIs on Google Cloud

Artificial Intelligence Expert Certification (CAIEC®) (oct 2025 - oct 2028)

## LANGUAGES

Spanish (*native*) - English (C1)