

KIN OCÉLOTL CUAUHTLI LÓPEZ MENDOZA

Data Scientist and AI Engineer

 kinlopezm@gmail.com  Mexico City, Mexico  kinocelotl.com  (+52) 56 6539 8679

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PROFILE

Astrophysicist and Data Scientist with a strong foundation in NLP and scalable AI workflows. Experienced in the design of Retrieval-Augmented Generation (RAG) systems, context-aware LLM prompting via Model Context Protocol (MCP), and automation with n8n and Salesforce. Skilled in integrating sentiment analysis, vector databases, and large-scale batch processing using Google Cloud Platform. Proven ability to transform raw conversational data into meaningful insights using Gemini, Flash 2.5, and LangChain. My scientific background fuels a deep understanding of uncertainty, modeling, and inference, critical in the development of robust data products.

EXPERIENCE

Data Engineer

Hologram

 Jun 2026 – Present  Mexico City, México

- Refactored the analytics layer of a pharmaceutical distributor's dashboards into a **Medallion architecture (Bronze/Silver/Gold)** on **BigQuery**, reducing query cost from **61 GB to 2 GB per dashboard load** by aggregating a 373M-row table into a daily summary and precomputing metrics that don't change intraday.
- Consolidated logic that the legacy codebase duplicated once per hierarchy level into a single parameterized function, so one object now serves the representative, zone, territory and division views.
- Shipped the migration as **mirror procedures** with the same signatures and columns as the originals, so the backend switched by changing only the dataset name, with the legacy path intact as rollback.
- Built a validation harness comparing **Oracle**, the REST API and three BigQuery environments cell by cell across six user profiles, which caught two correctness bugs before release: **FLOAT64** rounding drift against Oracle's **NUMBER**, and a cut-off date computed globally instead of per scope.

AI Engineer & Data Scientist

Tocino AI

 Dec 2025 – May 2026  Mexico City, México

- Architected a production-grade **FastAPI** backend orchestrating autonomous, multi-step **LLM agents (GPT-4o/Claude)** for the automated generation of **corporate expense policies and strategic budgets**, streamlining audit workflows against **Mexican SAT (CFDI 4.0)** regulations.
- Engineered a high-performance **Polars** ETL pipeline to process thousands of XML invoices, implementing **IQR outlier detection** and adaptive regionalization to generate statistically sound **policy thresholds and budget allocations** with sub-second latency.

- Designed a 5-stage intelligence pipeline combining **Deterministic Mapping → LLM Inference → Statistical Post-Processing**, bridging raw fiscal data with refined **business taxonomies for budgets and policies** while enforcing **Hexagonal/Clean Architecture**.
- Implemented a comprehensive **AI audit & traceability framework** that logs prompt-response pairs and intermediate statistical states in **PostgreSQL/SQLModel**, ensuring 100% reproducibility and compliance for both financial reporting and budget execution.

Data scientist

Jungla Labs

 May 2024 – Present  Mexico City, México

- Designed a production-ready **RAG pipeline** using **LangChain + Pinecone**, integrated with n8n workflows, allowing secure domain-specific knowledge injection into LLM prompts.
- Implemented a dynamic **Model Context Protocol (MCP)** layer to structure background context and user metadata, optimizing conversational response generation by LLMs with reduced hallucination rates.
- Developed modular prompt templates and context injectors tailored to client domains (CRM support, marketing summaries, financial Q&A), deployed through **Vertex AI batch prediction endpoints**.
- Created enterprise-grade proof-of-concept knowledge assistants using **Vertex AI-hosted foundation models (Gemini Pro, PaLM 2/Flash 2.5)**, with custom tuning and retrieval-augmented evaluation.
- Generated custom visual and textual assets using **MidJourney** and LLMs for content automation in low-budget client campaigns.
- Automated backend processes between Salesforce and third-party APIs using n8n, including Slack/Telegram alerting and Airtable integration.

Data Scientist

Evidente AI

📅 May 2024 – Jan 2025 📍 Mexico City, México

- Designed and deployed a scalable **batch LLM inference system on Vertex AI**, orchestrating multi-model summarization pipelines (Gemini Pro, PaLM 2/Bison, Flash 2.5) across 10M+ records.
- Prototyped a **hybrid RAG + MCP architecture** combining Pinecone vector retrieval with structured Firestore/BigQuery data, injected via **Vertex AI custom prediction containers** to improve long-form summarization consistency by 35
- Integrated **sentiment analysis, turn segmentation, and triggered intent extraction** into preprocessing layers feeding Vertex AI models, enriching embeddings and downstream summaries.
- Built end-to-end NLP workflows using BigQuery, Firestore, Pandas, and **Vertex AI Pipelines**, processing over 10M customer conversations with <2-hour SLA.
- Reduced model latency by 40% and improved semantic alignment through context window engineering and prompt chaining strategies validated in **Vertex AI Model Registry**.
- Refactored monolithic code into modular, testable services using Hexagonal, Vertical Slicing, and Screaming Architecture principles—deployed via **Vertex AI custom training jobs**.
- Delivered reusable **Cloud Shell deployment scripts** and Terraform modules to enable reproducible, role-based Vertex AI environments across engineering teams.

Sr. Salesforce Developer

Mi Lámina

📅 Aug 2022 – Nov 2023 📍 Mexico City - N.L., México

- Designed and implemented 10+ validation rules, ensuring 100% compliance with business requirements.
- Automated 5+ workflows with Flows and Process Builder, reducing manual effort by 30%.
- Developed Triggers and Queueable Apex classes for event-driven, asynchronous processing.
- Improved SOQL query efficiency by 20% through code optimization.
- Implemented an AI-powered conversational assistant using Retrieval-Augmented Generation (RAG) to help non-technical sales staff interact with Salesforce through natural language, significantly lowering the learning curve for older team members.

Salesforce Developer

Grupo Salinas

📅 Feb 2022 – Aug 2022 📍 Mexico City, México

- Created 7+ dynamic and responsive UIs with Aura Components.
- Developed 15+ custom Apex controllers and optimized SOQL queries.
- Automated business processes using Flows, reducing operational bottlenecks.
- Enhanced system response times by 15% through backend logic improvements.
- Collaborated on legacy codebases by extending and maintaining existing Salesforce implementations, adding new features while ensuring system stability.
- Contributed to data-driven decision-making initiatives within the team, proposing analytical approaches such as Pareto analysis to identify fraud patterns in operational data.
- Participated in an internal Tableau hackathon, exploring data visualization techniques to communicate business insights.
- Supported early explorations of AI-based solutions for fraud detection, aligning technical feasibility with business needs.

Jr. Salesforce Consultant

Fast Cloud Consulting

📅 Aug 2019 – Feb 2020 📍 Mexico City, México

- Configured 20+ custom fields and objects to support business processes.
- Implemented Process Builder automations to streamline workflows.
- Developed robust validation rules to ensure data integrity and consistency.

EDUCATION

Ph.D. Astrophysics

Instituto de Astronomía-UNAM

📅 2020 – Present 📍 Mexico City, México

M.Sc. Astrophysics

Instituto de Astronomía-UNAM

📅 2017 – 2020 📍 Mexico City, México

B.Sc. Mechatronic Engineering

Universidad Politécnica de Chiapas

📅 2012 – 2016 📍 Chiapas, México

HARD SKILLS

Python, Pandas, NumPy	●	●	●	●	●
Git, Cloud Tools	●	●	●	●	●
GCP, Vertex AI, BigQuery, Firestore	●	●	●	●	●
LangChain, NLP Models	●	●	●	●	●
Prompt Engineering	●	●	●	●	●
FastAPI, REST APIs	●	●	●	●	●
Salesforce (Apex, SOQL, LWC, Flows)	●	●	●	●	●
Docker, Kubernetes, Terraform	●	●	●	●	●
PySpark	●	●	●	●	●
Airflow, dbt	●	●	●	●	●
Power BI, Tableau	●	●	●	●	●
CI/CD, Jenkins, GitHub Actions	●	●	●	●	●

SOFT SKILLS

- Communication and teamwork
- Critical thinking and problem-solving
- Adaptability and resilience
- Mentorship and collaboration
- Detail-oriented, results-driven

PUBLICATIONS

- López Mendoza K. Ocelotl C., Alan M. Watson, William H. Lee, R. L. Becerra, Pereyra M. (2024). An evaluation of the BALROG and RoboBA algorithms for determining the position of Fermi/GBM GRBs, MNRAS 531(2), 2775–2784.
- More at kinocelotl.com

LANGUAGES

- Spanish: Native
- English: Professional working proficiency

CERTIFICATIONS

- See my certifications on platzi.com/p/kinocelotl/
- See my salesforce [trailblazer profile](#)

PROJECTS

- GRB Localization Algorithm Comparison

Ph.D. Project

📅 2020 – Present

📍 Mexico City, México

 - Collected and processed data from Fermi-GBM and Swift-BAT using Selenium, Requests, Colab.
 - Built ETL pipelines with Pandas; applied K-S, chi-squared, bootstrap analysis.
 - Modeled error distributions; optimized DDOTI observation strategies.
 - Published results in MNRAS.
- Neutrino–Gamma-ray Correlation

M.Sc. Thesis

📅 2017 – 2020

📍 Mexico City, México

 - Correlation analysis of ICECUBE neutrinos and gamma-ray sources.
 - Used Pandas, NumPy, Astropy for analysis.