Daniel Iván Parra Verde

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Github: danivpv | Portfolio: danivpv.com | LinkedIn: danivpv | Hugging Face: danivpv

EDUCATION

UNAM-CFATA
2021 | BSc. Technology

GRONINGEN UNIVERSITY (G)
2019 | BSc. AI
Netherlands; Full Scholarship

UNAM-IIMAS
2022 | MSc. Mathematics

SKILLS

Programming Languages:
Python • TypeScript • SQL • Julia • Wolfram • Bash

Frameworks:
Django • FastAPI • Airflow • React • Next.js • Prefect

Libraries:
Langchain • LlamaIndex • OpenCV • Pandas • PyTorch • Scikit Learn • Numpy • SQLAlchemy • Docling • Pytest

Cloud Services:
Hugging Face • AWS SageMaker • AWS S3 • AWS Lambda • AWS API Gateway • CometML • ZenML • Railway • Vercel • Stripe • Sendgrid

Databases:
PostgreSQL • MongoDB • Qdrant • Redis • SQLite

Software Tools:
Docker • Git • VSCode • Cursor • LaTeX • Microsoft Office • Slack • Notion

Languages
English (+C1) • German (+B1) • Spanish

COURSEWORK

Bachelor
Deep Learning in **Python** (G)
Relational Databases in **SQL** (G)
Artificial Intelligence in **Python** (G)
Algorithms and Data Structures in **C** (G)
Linear Algebra
Differential Equations Series

Master
Statistical Inference
Theoretic Machine Learning
Information Theory
Statistical Foundations of Privacy
Numerical Analysis **Python, Julia**
Real and Functional Analysis

WORK EXPERIENCE

FOUNDER & AI ENGINEER
MXAI | January 2024 – Present | Remote

- Developed and deployed AI-powered solutions on **AWS** with event-driven architectures for AI agents with **Langchain** and **RAG**.
- Built corporate websites using the modern tech stack of **Next.js**, **TypeScript**, **Tailwind** and **shadcn/ui** for mobile first responsive designs.
- Led customer sales meetings and demo presentations to iterate on requirements and validate value propositions.

DATA SCIENTIST
Kuona | November 2023 – June 2024 | Remote

- Developed **RNNs** for sales forecasting with **PyTorch**, served through a batch ML system hosted in **AWS**. Ensured availability of predictions for clients to simulate revenue management scenarios with **Django** and **PostgreSQL**.
- Proposed using **QLora** for model fine-tuning and custom loss functions to improve business KPIs.
- Modeled competitors' pricing data and implemented LIME for demand elasticity analysis using **Pandas**, **Pytorch**, **Scikit-Learn**, and **PostgreSQL**.

DATA SCIENTIST JR.
Entropía AI | February 2023 – November 2023 | Remote

- Led the development of **RAG** pipelines, enhancing accuracy in QA benchmarks for regulatory datasets with **LlamaIndex**, **MongoDB**, and **LangChain**.
- Created **ELT** pipelines with **Python**, **bs4** and **Airflow** from scrapped Mexican Political System websites into **MongoDB**.
- Contributed to the **agile** development of Icaro AI web app hosted in **Heroku**.

DEVELOPER INTERNSHIP
Wolfram Research | February 2021 – February 2022 | Remote

- Built the 'Wolfram Summer Camp' website with **Wolfram One's** cloud.
- Published "Turing Patterns in Networks" in their Complex Systems Journal.
- Rotated into Wolfram Alpha software development team.

PROJECTS

ARXIV DOMAIN EXPERT LLM
GitHub Repository

- Developed ML pipeline and created custom finetunning datasets in **Hugging Face** for an ArXiv-specialized LLM, trained and deployed on **AWS SageMaker**.
- Utilizes **MongoDB**, **Qdrant**, **ZenML**, **CometML**, and **AWS** for infrastructure.

MASTER THESIS: NEURAL MODEL IDENTIFICATION WITH EKF
PhD. Esteban A. Hernandez-Vargas | Systems Medicine of Infectious Diseases

- Implemented a custom training algorithm (weight update rule) for recurrent neural networks using the Extended Kalman Filter Theory.
- Error analysis of optimization, approximation, and statistical generalization.

"CONVOCATORIA JÓVENES TALENTOS 2018" CONCYTEC
PhD. Rafael Chávez Moreno | Unit of High Technology Juriquilla, Qro.

- Secured funding ($\$89,000$ MXN) for the design and manufacture of a Rover.
- Led the development of the computer vision and path planning subsystems using **Python**, **Raspberry Pi**, and **Kinect** sensors.