

# FELIX VALOR ESCRIBANO

Software Engineer · Generative AI, Machine Learning & Backend

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Software engineer with 4+ years building and deploying AI solutions — from generative AI (LLMs, RAG, agents, fine-tuning, LangChain, Vertex AI) to classic machine learning and computer vision (YOLO, BERT, Whisper) — taken from idea to production. I work in contexts where mistakes have consequences: national election counts, legal and financial documents. Comfortable moving across backend architecture, MLOps and cloud deployment (GCP, Azure), and I ship my own products solo, from scratch to production.

## WORK EXPERIENCE

Software Engineer · Generative AI — BC Digital Madrid, Spain · May 2025 - Present

- 10+ document data extraction projects using generative AI (LangChain and Vertex AI) for the real estate sector, processing **over 5,000 documents a day at 90–95% extraction accuracy**: property title copies, land registry excerpts, appraisals, invoices, ID documents, cadastral certifications and energy performance certificates.
- Continuous research into new LLM models and extraction techniques, rolling improvements into live production systems without breaking them.
- Direct work on production across a multi-repository environment, prioritizing stability and continuous improvement.

Software Engineer · AI Focus — Indra Madrid, Spain · Jan 2023 - Apr 2025

- Electoral processes** (governments of Argentina, Spain and Catalonia): built the computer vision system that reads scanned vote-count records and assigns each party's votes. On Argentina's election day it processed **100,000+ records within hours at 90%+ accuracy**, cutting the manual review team's bulk workload to a fraction of the time previous elections had required. Set up the on-site hardware and monitored every Kubernetes instance live throughout the count.
- Multi-provider generative AI (GPT-4, Gemini, Claude, Mistral) for information extraction and understanding, applying RAG, agentic architectures, advanced prompting and fine-tuning / domain pretraining.
- Hybrid solutions combining generative AI with classic machine learning and computer vision: object detection in images and video (PyTorch, TensorFlow, YOLO), text processing (BERT), audio transcription (Whisper) and image processing (OCR/ICR). Includes NLP email classification for Real Madrid's members support inbox, at **95%+ accuracy**.
- Designed and deployed Python (FastAPI) microservices containerized with Docker on Azure, GCP and OpenShift.
- Other high-profile clients: Aena, Instituto Cervantes and Plenitude. Available for extended on-site travel.

Software Engineer (Erasmus+) — 4Property Dublin, Ireland · Sep 2022 - Dec 2022

- Python web scraping and maintenance of SQL databases on Azure, within an English-speaking engineering team.

Software Engineer — Indra Ciudad Real, Spain · Mar 2022 - Jun 2022

- Computer vision and image processing: ID card number recognition from photographs and digit extraction from electoral process records.

## PERSONAL PROJECTS

ChessScan 2.0 — chessscan.com 2025 - 2026

Full rebuild of my capstone project: two chained YOLOv8 models — board segmentation, with the four corners and the homography derived from the predicted mask, plus 12-class piece detection — trained on a custom dataset of **~130 images and 2,400 hand-labeled boxes** (Label Studio + Ultralytics). A **28-run architecture sweep** (YOLOv8 vs YOLO11, nano to x) confirmed the nano model was enough, keeping inference cheap. React / TypeScript / Vite / Tailwind frontend, deployed on GCP Cloud Run.

docsutils — docsutils.com 2025 - 2026

PDF tools platform built with FastAPI and Docker, deployed on GCP Cloud Run with self-hosted analytics (Umami). Built solo from scratch to production: product, backend, deployment and domain.

## TECHNICAL SKILLS

|                      |                                                                                                                                              |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Generative AI / LLMs | GPT-4, Gemini, Claude, Mistral · LangChain · Vertex AI · RAG · agentic architectures · fine-tuning / domain pretraining · advanced prompting |
| ML & Computer Vision | PyTorch · TensorFlow · Scikit-Learn · pandas · YOLO · BERT · Whisper · OpenCV · MLOps · OCR/ICR                                              |
| Backend              | Python (FastAPI, Flask) · Java · .NET · microservices architecture                                                                           |
| Cloud & DevOps       | Docker · Kubernetes · GCP (Cloud Run, Vertex AI) · Azure · OpenShift · CI/CD                                                                 |
| Data & Frontend      | SQL · ElasticSearch · Apache Kafka · Grafana · React · TypeScript · Vite                                                                     |

## EDUCATION

Higher Vocational Degree in Multi-Platform Application Development (DAM)

IES Gregorio Prieto · Valdepeñas, Spain · 2020 - 2022

## LANGUAGES

- Spanish — Native
- English — Professional working proficiency (C1)