LUIS TORAL

Lead AI Engineer
AB10 6QN, Aberdeen, United Kingdom
+44 7481 171487 | luistoq@outlook.com

PROFILE

Lead AI Engineer delivering production **RAG** systems and regulatory assistants end-to-end: **Python** backends (FastAPI), vector search, API deployment, and **CI/CD**. Built AI solutions for **regulatory compliance** (building regulations, well decommissioning), industrial inspection, and document intelligence. Strong **prompt engineering** and retrieval design; experienced integrating OpenAI/open-source LLMs, **Hugging Face**, **PyTorch**, and **TensorFlow**, with cloud deployments on Azure. Experienced in **MLOps** practices including model versioning, monitoring, and production deployment pipelines. Comfortable aligning technical delivery to business and compliance outcomes.

EMPLOYMENT HISTORY

Oct 2024 — Present

Lead AI Engineer, Ventex Studio (Remote)

Founding-level AI engineer supporting multiple venture products within the studio. Responsible for core AI architecture, backend services, and delivery of production-ready MVPs.

RAHD Platform – Well Data Intelligence for Decommissioning

- Contributed to the development of the RAHD regulatory platform, building multi-source **oil & gas well-data archive** ingestion and **RAG** capabilities for operator clients.
- Implemented **MLOps workflows** with **GitHub Actions** CI/CD, automated testing, and model versioning; collaborated with FE/BE teams (Node, React, Prisma, PostgreSQL) using **Agile** sprints and GitHub Projects to deliver **FastAPI** services.
- Designed **retrieval-aware prompting** and re-ranking strategies for higher-precision regulatory Q&A and extraction (RAG-first approach).

ROHM – Building Regulations Compliance Assistant

- Delivered the full-stack MVP independently using **FastAPI**, **Supabase Postgres**, **Weaviate** (vector search), and **React + Vite + Tailwind**.
- Implemented high-accuracy retrieval pipelines combining **LlamaIndex** orchestration and Weaviate semantic search for regulatory content.
- Built authentication, dynamic project creation, and multi-step UX for regulation scoping; achieved up to **85% faster** regulatory information access via retrieval-centric design.

HPR Vision – Subsea Inspection AI Platform

- Developed video ingestion and AI-assisted reporting tools using **Azure Functions**, **Blob Storage**, and Python microservices; integrated **LLM-based** summarisation for inspection insights.

Dec 2023 — Oct 2024

AI Engineer, Pixel View Consulting (Aberdeen, Hybrid)

Delivered multiple AI and data-centric MVPs for industrial and consumer clients, owning architecture, implementation, and cloud deployment.

TRAC – Industrial Data Platform

- Built ETL pipelines and a micro-SaaS to process millions of ultrasonic readings with automated validation, normalisation, and datashader-based visualisation, reducing report cycles from **5 days to 1**.
- Designed RESTful API architecture integrating multi-stage data processing, validation workflows, and PostgreSQL operations.

Innosport AI – Sports Performance Coaching Platform

- Built an AI-assisted coaching platform using **React**, **Azure Functions**, **Blob Storage**, and Python; developed pose analysis workflows, video annotation tools, and real-time feedback UX.

Strategic Scorecard – Organisational Strategy Platform

- Delivered a full-stack strategy-tracking platform using **FastAPI**, **Supabase**, and **React**; implemented hierarchical weighted scoring, task tracking, user authentication, and multi-dashboard support.

Jul 2021 — Dec 2023 **Machine Learning Engineer, AISUS** (Innovate UK KTP, Aberdeen)

- Led a **£250k** project developing deep learning models for remote visual inspection using **PyTorch** and **TensorFlow**.
- Built multi-label defect detection models (pitting, cracks, corrosion), for automating anomaly detection in offshore visual inspections.
- Developed **unsupervised learning models** using **scikit-learn** (Isolation Forest, K-means clustering) to predict corrosion rates from ultrasonic readings, enabling proactive maintenance strategies.
- Created LLM-assisted pipelines using **LangChain** to summarise/extract content from historical inspection reports (**prompt engineering** for technical context).

2020 — 2021 **Machine Learning Research Assistant, Robert Gordon University** (Aberdeen)

- Developed an intelligent document analysis pipeline for engineering diagrams using **OpenCV** and **YOLO**; presented research at **ICDAR**.

EDUCATION

Jan 2023 — Dec 2024 **MRes Data Science, Robert Gordon University** (Aberdeen)
Research focused on automated visual inspection and large-scale data processing pipelines.

Jul 2020 — Dec 2020 **MSc Oil & Gas Finance and Accounting, RGU** (Aberdeen)
Strengthened analytical and SQL-based forecasting skills.

Aug 2012 — May 2018 **BSc Mechanical Engineering, ITESM** (Mexico)
Graduated with Honours under academic scholarship.

SKILLS

Programming: Python (Production-level), SQL

AI/ML Frameworks: PyTorch, TensorFlow, Hugging Face, OpenAI API, scikit-learn

RAG & LLMs: RagFlow, LangChain, LlamaIndex, Prompt Engineering, Retrieval Optimisation

API Development: FastAPI, REST APIs, Microservices Architecture

MLOps & DevOps: Model Lifecycle Management, Monitoring, CI/CD (GitHub Actions), Git, Docker, Kubernetes

Databases: Vector DBs (Weaviate), PostgreSQL, Supabase

Cloud Platforms: Azure (Functions, Blob Storage, App Services)

Frontend: React, Vite, Tailwind CSS

LANGUAGES

English: Fluent **Spanish:** Native

REFERENCES

Available upon request.