Pablo Williams

Applied AI Engineer & Data Scientist

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TECHNICAL SKILLS

Languages	Python, SQL, R, JavaScript, TypeScript
AI & data	PyTorch, scikit-learn, XGBoost, pandas, LangGraph, RAG, BM25, PostgreSQL, DuckDB, dbt
Engineering & BI	FastAPI, Docker, pytest, GitHub Actions, n8n, Whisper, React, Tableau, Power BI

EXPERIENCE

Applied AI Engineering Intern — **May 2026 to Present**
QuantiFire Ltd — *London, UK*

- Developed a prototype investor-relations assistant with 1,143 automated tests, routing questions across vector search, BM25, text-to-SQL and knowledge-graph traversal over approximately 950,000 records across 23 tables.
- Designed an 8-lens verification workflow that calculates quantitative claims as SQL aggregates, reconciles each value to source evidence and abstains when support is insufficient; achieved 96.5% accuracy on a 200-question evaluation set, including 30 expert-written questions.

Data Analyst — **Sep 2023 to May 2026**
APJ Kapital — *London, UK*

- Built PostgreSQL pipelines and Tableau dashboards across 100,000+ market and portfolio records, giving weekly investment reviews a consistent view of P&L, sector allocation and factor exposure for 30+ equities.
- Automated a daily market digest in n8n, converting Discord videos into Whisper transcripts and GPT-4o summaries distributed through Telegram and email.
- Produced 150+ investment notes and buy, hold and sell recommendations from filings, earnings calls and news, turning research into portfolio decisions during weekly reviews.

AI Investment Programming Intern — **May 2022 to Oct 2022**
MDOTM — *Milan, Italy*

- Delivered customer-segmentation and investment-modelling tools in Python and R, converting raw client and market data into reusable features and model outputs for investment workflows.
- Built a repeatable price-and-fundamentals preparation pipeline for ML forecasting within a 40-person team whose platform won two international fintech awards.

PROJECTS

Longstop — *Python, SQL, SEC EDGAR, NLP*
- Finds failed mergers in SEC filings. Built a 10,051-deal dataset and 8-K rules engine; resolved 437 ambiguous filings, including 216 unrelated contracts, and raised proxy-field reconciliation from 16% to 43%.

Touchstone — *Python, FastAPI, RAG, pytest*
- AI assistant that refuses unverified numbers. Tested across 214 documents, 24 funds and 12 metrics; blocked 59 of 59 adversarial attempts and produced zero unsupported claims across 146 questions.

Stratum Analytics — *Tableau, SQL, Python, DuckDB, VaR*
- Explains risk across a family-office portfolio. Built a 59-model warehouse for a simulated €755m portfolio; controls detected 16 of 16 planted trade errors with zero false alarms.

SignalOps — *Python, dbt, FastAPI, Next.js*
- Detects data incidents before dashboards drift. On a synthetic planted-truth holdout, achieved 87.9% precision, 93.5% recall and 90.6% F1 while cutting false-positive episodes from 111 to 4.

Calibration-Optimised Equity Outperformance — *Python, scikit-learn, XGBoost, Optuna*
- Tests whether calibrated probabilities trade better. Across 457 stocks and 82,260 stock-months, calibration improved Sharpe from 0.69 to 0.77 and reduced maximum drawdown from 23.6% to 18.9%.

PipelinePulse — *Python, SQL, DuckDB, GitLab CI/CD*
- Tracks how quickly engineering teams ship code. Over 436,165 simulated job attempts, PELT detected 14 of 14 injected regressions with zero false alarms; 63 tests achieved 98.1% coverage.

EDUCATION

MSc Business Analytics — **Sep 2025 to Sep 2026**
University College London, completed Sep 2026; 72% average, final classification pending; Machine Learning, NLP, Predictive Analytics and Operations Analytics — *London, UK*

BSc Business Analytics, Minor in Accounting & Finance — **Sep 2021 to Jul 2025**
Lancaster University, Upper Second-Class Honours (2:1); Data Mining, Databases, Simulation and Decision Analysis — *Lancaster, UK*

LANGUAGES & TUTORING

Languages: Italian and English (native); Spanish (fluent)
Tutoring: Mathematics and computer science, GCSE to GMAT