

Keith So

Quantitative Trading Analyst, Crude Oil

London, United Kingdom | [LinkedIn](#) | [GitHub](#)

Quantitative trader and engineer building data platforms and ML-driven trading systems across commodities, credit, and energy markets.

EXPERIENCE

Quantitative Trading Analyst, Crude Oil

Unipac (trading arm of Sinopec)

Jul 2026 — Present
London Area, United Kingdom

Designed and deployed the desk's crude data platform ingesting 41 datasets into a versioned DuckDB database served by a 32-page Streamlit application. Developed the landed-cost arbitrage engine and refinery netback layer covering 39 physical crude routes with 78-84% entry signal hit rate. Delivered a live Brent-Dubai spread forecast using machine learning with 0.44 walk-forward IC. Implemented physical market and positioning monitors including Platts North Sea window, forward curves, and CTA replica tracking.

Quantitative Analyst, Insurance Solutions

M&G Investments

Nov 2024 — Jul 2026
London Area, United Kingdom

Designed and priced levered proceeds asset swaps with a Streamlit dashboard for UK gilts/linkers analysis. Delivered strategic asset allocation for multi-asset portfolios using Ortec Finance with multi-objective optimisation. Developed two dashboards: a real-time market analysis app in Shiny for Python and a Streamlit peer analysis app on SFCR data. Built a Solvency II Market Risk model in Python reducing computation time by 80%.

Quantitative Trader, Quant Trading Team

Anglo American

Jan 2022 — Oct 2024
Greater London, England, United Kingdom

Identified and monetised short- and long-term derivatives trading opportunities across discretionary, systematic and option books while managing risk and delta/gamma hedging. Generated +260k PnL on 50k VaR in 2023 and +600k on 150k VaR in H1 2024. Researched, developed, and executed low-frequency quantamental models across 13 commodities using Bloomberg, SMM, Fastmarkets, and Oceanbolt data. Developed ML models achieving backtest portfolio Sharpe ratios of 1.5-2.

Quantitative Analyst Intern, Quantitative Analytics

Brady Technologies

Oct 2021 — Dec 2021
Greater London, England, United Kingdom

Developed volume and price-direction ML models to beat VWAP pricing in half-hourly energy markets achieving over 80% accuracy with Ridge regression. Built a Python backtest engine that supported a new product launch.

Investment Financial Analyst, FP&A

Allstate Northern Ireland

Oct 2019 — Sep 2020
Belfast Metropolitan Area

Performed financial analysis on Allstate's \$89B investment portfolio including P&L and NII trending, yield roll-forwards, dividend reports, and SOX controls. Automated monthly, quarterly and annual reporting in Excel.

Actuarial Intern

Cigna

Jun 2018 — Aug 2018
Hong Kong

Summer Intern

AIA

Aug 2017 — Aug 2017
Hong Kong

EDUCATION

University of Strathclyde

MSc Quantitative Finance

Distinction. Thesis: SABR Volatility Model

Sep 2020 — Sep 2021

Udacity

AI in Trading in Quantitative Finance

Trading with Momentum

Breakout Strategy

Smart Beta and Portfolio Optimization

Alpha Research and Factor Modelling

NLP on Financial Statement

Sentiment Analysis with Neural Networks

Combining Signals for Enhanced Alpha

Backtesting

Jan 2020 — Jan 2020

Heriot-Watt University

BSc Actuarial Science

Activities and societies: Basketball team 1st/2nd

Sep 2015 — Jun 2019

Activities and societies: Prefect in my last 2 years.
Represented the school in basketball, badminton, athletics and volleyball.
Duke of Edinburgh Award(Bronze).
Glasgow Young Sports Leader Volunteering program.
Part of a National League basketball team Glasgow Rens(U16/U18)

PROJECTS

Memory layer for AI agents with decay, retrieval strengthening, and consolidation, Hippo (npm: hippo-memory)

Memory system for AI agents built with SQLite and zero dependencies. Features decay by default, strengthening through retrieval, and full provenance tracking. Exposed as an MCP server for use across agent frameworks.

Real-time European and GB grid data over MCP, Luminus (npm: luminus-mcp, PyPI: luminus-py)

Grid data provider for AI agents with 69 tools covering ENTSO-E and BMRS, including generation mix, day-ahead and intraday prices, balancing, and carbon intensity.

2-minute phone wellness check-in using acoustic spirometry and motion sensors, Resona

In-browser health assessment tool measuring FEV1, FVC, PEF via acoustic spirometry and tremor/gait via motion sensors. Built as part of AI and agent hackathons.

Tool registry for AI agents with hybrid retrieval and reliability gating, 2chain

Tool registry and discovery system for AI agents featuring hybrid retrieval, reliability gating, and JSON Schema contract enforcement. Initially built in MongoDB Agentic Evolution Hackathon, later rebuilt self-hosted.

Comparative testing platform for different agent harnesses, HarnessArena

Testing framework and leaderboard for comparing AI agent harnesses against the same task and hidden test suite. Tracks real recorded runs with full traces for debugging and evaluation.

Accounts-payable agent auto-paying clean invoices, Floater

Agentic system for automated invoice payment with cash-floor and counterparty-distress guardrails. Built for Cursor x Briefcase Money Movement track.

Plain-English QA over Lloyd's syndicate annual reports with page-level citations, Ask the Market

RAG system for querying Lloyd's of London syndicate annual reports with source attribution. Built on Aurora PostgreSQL with pgvector and AWS Bedrock.

Privileged-action Slack agent with hash-chained flight recording, flightrec-slack

Slack agent built on flightrec, a zero-dependency hash-chained flight recorder replaying every tool call and decision for audit. Exposed as both Slack agent and MCP server.

CTA-native memory engine with half-life decay and time-travel audit, Engram

Memory system for AI agents built natively on CockroachDB with half-life decay, scoped vector recall, and time-travel audit capabilities for compliance and debugging.

Autonomous Graviton inference tuner using Arm Performix counters, armsmith

Performance tuning system for Arm Graviton inference reading low-level Performix counters. Autonomously optimises inference speed while maintaining quality guardrails.

Two-week AI-native trading competition, Model to Market: The Quantitative Hack (AI Engine)

Developed a multi-strategy trading system across FX, metals and crypto using \$1M virtual credits. Built 30 strategies and executed a medium-frequency systematic approach through blind-trading final.

Sustainable fuel blend property prediction, Shell.ai / HackerEarth Hackathon 2025

Hybrid Lasso and CatBoost pipeline for predicting sustainable fuel blend properties. Solo entry achieving top-ranked individual submission among 7,000 participants.

Momentum volatility-threshold long-short copper strategy, Alphien Copper Challenge 2021

Systematic long-short copper trading strategy using momentum and volatility thresholds without leverage. Achieved consistent Sharpe ratios across training and unseen periods.

Trend-following and ML pricing of structured products, UBS Quant Hackathon 2020

Two-stage competition entry combining trend-following strategies on the S&P 500 with machine learning models for structured product pricing. Advanced to finals with FX carry strategy.

Momentum-based cross-asset allocation, Global Precious Metal Allocation Competition 2020

Multi-asset allocation strategy across precious metals using momentum signals. Exploited timing differences between metal price movements to outperform a gold-only benchmark.

CERTIFICATIONS

Market Microstructure , Coursera	Jun 2025
Bloomberg Market Concepts , Bloomberg LP	May 2021
Neural Networks and Deep Learning , Coursera	Jan 2021
Introduction to Trading, Machine Learning & GCP , Coursera	Sep 2020
C++ for Programmers , Udacity	Aug 2020
Intro to Artificial Intelligence , Udacity	Jun 2020

SKILLS

Commodities · Leadership · Problem Solving · Actuarial Science · Data Analysis · Financial Modeling · Derivatives · Financial Analysis · Portfolio Management · Machine Learning · Microsoft Excel · Microsoft Office · Microsoft Word · PowerPoint · Visual Basic for Applications (VBA) · R · SPSS · Claude Code · Codex · OpenClaw · Python · TypeScript · Node.js · MCP · DuckDB · Airflow · Streamlit · Databricks · Refinitiv RDP · Refinitiv API · Bloomberg Terminal · Bloomberg API · AI Agents · Probability & Statistics · Portfolio Optimisation · Risk Management · VaR · CVaR · Derivative Pricing · Numerical Methods · Econometrics · Commodities Trading · Futures Trading · Spreads Trading · Options Trading · Systematic Trading · SQLite · PostgreSQL · CockroachDB · Vector Search · Shiny for Python · pandas · Plotly · Ridge Regression · Lasso · CatBoost · Backtesting