

Paul Archer

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EDUCATION

Imperial College London, UK <i>MSc Mathematics and Finance</i>	2025 – 2026
Télécom Paris, France <i>Engineering Degree (Stochastic Modelling & Machine Learning)</i>	2023 – 2026 GPA: 3.95/4.0
Lycée Henri IV, France <i>Classe Préparatoire MP* (Mathematics & Physics)</i>	2021 – 2023 Top 5% Nationally

EXPERIENCE

WorldQuant BRAIN Platform <i>Alpha Contributor</i>	July 2025 – Present Remote
• Developed 5 profitable alpha signals with combined Sharpe ratio of 2.1, specializing in momentum, mean reversion, and microstructure patterns across global equity markets.	
Henri Mondor Hospital <i>Data Science Research Intern - Prof. Étienne Audureau's Team</i>	Summer 2025 Créteil, France
• Developed multivariate time series models (ARIMA, VAR, LSTM) to forecast cancer treatment outcomes on 10,000+ patient cohort, achieving 87% accuracy using survival analysis (Cox regression, Kaplan-Meier).	
• Engineered NLP+OCR pipeline extracting structured data from unstructured physician notes to identify treatment patterns, and developed separate framework analyzing research funding sources from academic publications 🐣.	
VibeMatch (AI Startup) <i>Co-Founder & Technical Lead</i>	2024 – 2025 Paris, France
• Co-founded vibematch.tech , an AI platform connecting creators with sponsors by analyzing social media profiles via integrated Instagram, YouTube, and Twitter APIs, using NLP to compute multi-dimensional compatibility scores 🐣.	
• Secured interest from VC funds (Frst, Continuum) through technical demonstrations and business pitches.	
Sopra Steria <i>Quantum Computing Intern</i>	Summer 2024 Courbevoie, France
• Developed quantum optimization algorithms leveraging cold-atom quantum computing on Pasqal's AWS emulators to solve large-scale network optimization problems under physical constraints, using SLSQP methods 🐣.	

PROJECTS

JP Morgan Data for Good Hackathon - Top 3 Finalist NLP + Geospatial Analytics 🐣	Oct. 2025
• Built analytics platform using NLP (sentiment analysis, theme extraction) and geospatial clustering (K-means, DBSCAN) to process 440+ surveys, map 160+ schools, and quantify cyber safety program impact.	
• Generated 50 qualified leads via dual-track fuzzy matching with interactive visualizations.	
Multi-Asset Systematic Trading Framework Ensemble ML + Alternative Data 🐣	Sep. 2025
• Engineered systematic trading strategy combining XGBoost , LSTM , and Transformer models on 250+ features (technical indicators, sentiment, order flow), achieving 5.3% CAGR, Sharpe 1.34 on 4-year walk-forward backtest.	
• Implemented Kelly criterion position sizing, 99% VaR monitoring, GARCH volatility forecasting, and HMM regime detection with rigorous out-of-sample validation preventing data snooping.	

TRADING COMPETITIONS

Optiver Ready Trader Go & QuantConnect Alpha Competition	2023 – 2025
• Built high-frequency trading algorithms with microsecond latency optimization and alternative data integration for systematic alpha generation.	

SKILLS

Programming: Python (NumPy, Pandas, Scikit-Learn, PyTorch, QuantLib), C++, R, SQL, Java, Excel VBA
Quantitative Methods: Monte Carlo, Time Series (ARIMA, GARCH, VAR), PCA, Cointegration, Kalman Filtering
Risk & Models: VaR, Expected Shortfall, Greeks, Black-Scholes, Heston, Hull-White, Cox Proportional Hazards
Languages: French (Native), English (C2), German (B2)

LEADERSHIP

General Secretary, Forum Télécom Paris	2024 – 2025
• Oversaw a €300K budget and led a 48-member team to organize one of France's largest student-run career fairs (1,000+ attendees, 80+ companies), achieving a €100K profit and featuring in Forbes 📰.	