

# Paul Archer

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## EDUCATION

<b>Imperial College London, UK</b> <i>MSc Mathematics and Finance</i> <ul style="list-style-type: none"><li>• <b>Coursework:</b> Stochastic Calculus, Statistics, Option Pricing, Portfolio Theory, Market Microstructure, ML</li></ul>	2025 – 2026
<b>Télécom Paris, France</b> <i>Engineering Degree (Stochastic Modelling &amp; Machine Learning)</i>	2023 – 2026 GPA: 3.95/4.0
<b>Lycée Henri IV, France</b> <i>Classe Préparatoire MP* (Mathematics &amp; Physics)</i>	2021 – 2023 Top 5% Nationally

## EXPERIENCE

<b>Balyasny Asset Management</b> <i>Incoming Quantitative Research Intern</i> <ul style="list-style-type: none"><li>• Joining a <b>L/S Equity</b> pod (Aerospace &amp; Defense); will work on systematic signal research and alpha generation.</li></ul>	Summer 2026 London, UK
<b>Henri Mondor Hospital</b> <i>Data Science Research Intern - Prof. Étienne Audureau's Team</i> <ul style="list-style-type: none"><li>• Developed <b>multivariate time series models</b> (ARIMA, VAR, LSTM) to forecast cancer treatment outcomes on 10,000+ patient cohort; validated via survival analysis (Cox regression, Kaplan-Meier) achieving C-index of 0.81.</li><li>• Engineered an NLP/OCR pipeline to extract structured biomarkers (T-cells, blood counts) from clinical notes.</li></ul>	Summer 2025 Créteil, France
<b>VibeMatch (AI Startup)</b> <i>Co-Founder &amp; CEO</i> <ul style="list-style-type: none"><li>• <b>Co-founded</b> <a href="#">vibematch.tech</a>, 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 🧠.</li><li>• Secured interest from <b>VC funds</b> (Frst, Continuum) through technical demonstrations and business pitches.</li></ul>	2024 – 2025 Paris, France
<b>Sopra Steria</b> <i>Quantum Computing Intern</i> <ul style="list-style-type: none"><li>• Built a <b>quantum optimization</b> algorithm for network resource allocation on neutral-atom hardware (Pasqal), using SLSQP to minimize congestion under physical constraints 🧠.</li></ul>	Summer 2024 Courbevoie, France

## PROJECTS

<b>Multi-Strategy Alpha Engine</b>   <i>ML Ensemble + Alternative Data</i> 🧠 🌐	Sep. 2025
<ul style="list-style-type: none"><li>• Built a systematic equity strategy (140 symbols) using Bayesian Model Averaging over a Transformer/LSTM/XGBoost ensemble, with an NLP/NER pipeline on Bloomberg &amp; Reddit to generate ticker-level and macro sentiment signals.</li><li>• Allocated capital via <b>Black-Litterman</b> with NLP-gated views, HMM regime detection for proactive de-leveraging, and Kelly sizing — achieving Sharpe 1.42 and max drawdown &lt;11% on a 5-year walk-forward backtest.</li></ul>	
<b>JP Morgan Data for Good Hackathon</b>   <i>1st Place – Geospatial Analytics</i> 🧠	Oct. 2025
<ul style="list-style-type: none"><li>• Built a school expansion platform for a UK charity: geocoded 160+ schools, cross-referenced with UK government deprivation data (FSM%), then applied K-means/DBSCAN clustering to generate 200+ priority-scored outreach leads.</li></ul>	

## 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

<b>General Secretary</b>   <i>Forum Télécom Paris</i> <ul style="list-style-type: none"><li>• Oversaw a <b>€300K budget</b> and led a <b>48-member team</b> to organize one of France's largest student-run career fairs (1,000+ attendees, 80+ companies), achieving a €100K profit and featuring in <i>Forbes</i>.</li></ul>	2024 – 2025
<b>Rugby Captain</b>   <i>Telecom Paris Rugby Team</i>	2024 – 2025