Paul Archer

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EDUCATION

Imperial College London, UK (Incoming - 2025-2026)   2025 – 2026
MSc Mathematics and Finance

Télécom Paris, France   2023 – 2026
Engineering Degree (Grande École)   *GPA: 3.95/4.0*

- Specializations: **Stochastic Modeling & Scientific Computing (MACS), Data Science (DS)**
- Key Courses: **Stochastic Processes, Numerical Analysis, High-Dimensional Probability, Machine Learning, Optimization**
- **Ranking:** Top 10% of the class

Lycée Henri IV, Paris   2021 – 2023
Classes Préparatoires MP (Mathematics & Physics)

PROFESSIONAL EXPERIENCE

Henri Mondor Hospital - AP-HP   Summer 2025
Data Science Internship - Prof. Étienne Audureau's Team   *Créteil, France*

- Engineered **time series forecasting** models to analyze cancer treatment sequences, identifying statistical patterns between demographics using **predictive analytics** on AP-HP's health data warehouse (EDS).
- Built automated **NLP pipeline** processing unstructured physician notes to extract quantitative insights and treatment patterns from large-scale medical datasets.
- Developed **medical research funding analyzer** using OCR + LLM with **statistical modeling**, generating quantitative insights on funding sources .

Sopra Steria   Summer 2024
Quantum Computing Internship   *Courbevoie, France*

- Designed **quantum optimization algorithms** using **cold atoms-based computing** (Pasqal) for telecom network resource allocation .
- Mapped network topology onto **qubits** and implemented optimization models on **Pasqal's quantum emulator**.

TECHNICAL PROJECTS

Trading Bot | *Automated Investment System*

- Engineered **algorithmic trading system** implementing deep reinforcement learning with advanced technical indicators (MACD, RSI, Bollinger Bands) achieving 18% annual returns.
- Built comprehensive **backtesting framework** with **risk management** protocols including VaR calculations and drawdown controls on historical market data.

GEMCARE | *Google DeepMind Healthcare Hackathon - Top 10*

- Architected **AI-powered medical record platform** using Gemma 3/MedGemma models with intelligent document processing and ClinicalTrials.gov API integration.
- Deployed scalable architecture on **Google Cloud Platform** enabling real-time processing of complex medical data with **statistical risk analysis** capabilities.

SKILLS

Programming: Python (Pandas, Scikit-Learn, PyTorch, QuantLib), C++, R, MATLAB, SQL, Excel VBA
Finance: Derivatives Pricing, Portfolio Optimization, Risk Management, Algorithmic Trading, Monte Carlo Simulation
Languages: French (Native), English (C2/Fluent - TOEFL 106/120), German (B2), Spanish (A2), Danish (A1)

LEADERSHIP & ACTIVITIES

President | *Surf Association of Télécom Paris*   2024 – Present
General Secretary | *Forum Télécom Paris*   2024 – Present

- Largest student career fair at Télécom Paris, with 1,000+ attendees and 80+ companies, interviewed by *Forbes* .
- Managed a **€300,000 budget** generating **€100,000 profit**, reinvested in student activities and associations.

Team Captain | *Télécom Paris Rugby Team*   2024 – Present