

Paul Bernard

Software Engineer

Experienced senior software engineer with a focus on building production software to the highest standards of performance, scalability, security, and robustness.

CONTACT

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EXPERTISE

- Software Engineering
- Backend | Cloud Infrastructure
- Data Science | Machine Learning
- Architecture | System Design
- Cybersecurity
- CI/CD | Testing

EDUCATION

MSc Computer Science

ENSIMAG — School of Applied Mathematics and Computer Science.

MSc Financial Systems Engineering

UCL — University College London

SKILLS

Programming Languages

Python, C++, Java, C#, Rust, Bash, SQL, JavaScript, TypeScript, HTML, CSS

Libraries | Framework

Pandas, Numpy, Scikit-learn, AutoGluon, XGBoost, CatBoost, React, Next.js, Tailwind CSS

Tools | Platforms

GCP (Compute Engine, BigQuery, Dataform), Kubernetes, Docker, MLFlow, Git, GitHub, Vercel, Windows, Linux, Jupyter, VSCode, Matlab, R

INTERESTS

- Rock climbing
- Chess
- Electronic sports

EXPERIENCE

IKASI — Senior AI Software Engineer

San Francisco, US

2024 – Present

- Designed and built a green-field machine learning platform to train, evaluate and release state of the art AI models to production.
- Managing Cloud Infrastructure and production AI models across all clients.
- Innovative model design and research to increase model accuracy and improve clients' key operational metrics.

Google | DeepMind — Senior AI Security Engineer

London, U.K.

2023 – 2024

- Engineering lead for AI for Cyber-Security initiative, applying state-of-the-art ML techniques to cybersecurity.
- Synth-ID image watermarking product launch engineering.
- Advisory capacity to multiple research groups on security and engineering practices.
- Threat modelling exercises across range of products.

Meta | WhatsApp — Lead Software Engineer

London, U.K.

2021 – 2023

- Developing new machine learning models and policies to reduce prevalence of account theft and spam on WhatsApp.
- Produced technical reports and worked in tandem with Google Malware teams to take down millions of malicious clones of WhatsApp on Android.
- Discovered new attack vectors and built new signals to protect users against account compromise attacks (credentials theft).
- High performance engineering to handle millions of messages per seconds.

Goldman Sachs — Lead Software Engineer

London, U.K.

2015 – 2021

- Providing a suite of low latency exchange trading services to clients globally via direct connectivity (API), third party aggregators (E.g., Bloomberg) or Goldman Sachs' flagship GUI application.
- Setting strategic goals, developing new products, attending client meetings as product expert and leading the technical design discussions.
- Improved monetization by 20% yearly and increase the share of electronic trading from 20% to 50% of all Foreign Exchange spot trading.

BNP Paribas — Senior Software Engineer — London, U.K.

2014 – 2015

Aspect Capital — Software Engineer — London, U.K.

2013 – 2014

Barclays — Software Engineer — London, U.K.

2011 – 2013

UCL — Software Engineer — London, U.K.

2010 – 2011

Bloomberg — Software Engineer — London, U.K.

2010 – 2010

PROJECTS

Crypto-Currencies — Automated Trading Platform

- Built a systematic trading platform with fully automated investment strategies.
- Market data publishing, real-time pricing, risk management and trading.
- Combination of short and medium term trend-following strategies.
- Market-making liquidity providing across multiple exchanges.

Hold'em Poker — A.I. Augmented Robot

- Developed a multi-tables poker robot with interfaces to online real money poker rooms.
- Monte Carlo simulations and regret-minimization A.I. strategies.