

BIANCA BODO

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OBJECTIVE

Data scientist and ML practitioner with production experience in full-stack ML systems and high-frequency data environments. Background spans GenAI product development at JPMorganChase, statistical optimisation at Alpine F1, and an MEng from UCL. Looking to move into ML engineering, software engineering or quant development.

WORK EXPERIENCE

Applied Machine Learning Analyst – JPMorganChase - London, UK Sep 2024 – Present

- Built a production RAG system for Chase UK's mobile banking FAQ assistant: async Python 3.13 monorepo with Litestar / Strawberry GraphQL API, HNSWLib vector search, LLM-driven re-ranking, and Azure OpenAI answer generation over HTTP/2.
- Engineered multi-layer content-safety guardrails: Presidio PII/PCI detection, LLM intent analysis, and risk evaluation; maintained >80% test coverage with pytest-asyncio, Vitest property tests, and k6 load benchmarks.
- Delivered the React 19 / Next.js 15 frontend with Apollo GraphQL; managed AWS infrastructure via Terraform (EKS, S3) and Helm.
- Optimised inference cost by migrating from GPT-4.1 to GPT-5.1 without accuracy regression; first in the ML team to hold a hybrid role spanning traditional ML and full MLOps infrastructure.

Data Science Intern – Alpine F1 Team - Enstone, UK Aug 2022 – Aug 2023

- Led pit-signal accuracy project: applied advanced statistical techniques and error-function minimisation to improve signal accuracy by 91%; results adopted directly by Strategy and Race Track teams.
- Conducted process mining of 3DX engineering logs, identifying 80% of process divergences across three model years; findings adopted by Enterprise Architecture and PLM teams.

AI Software Developer Intern – Bosch - Cluj-Napoca, Romania Jul – Sep 2021

- Designed an ANN-based object detection system for automotive front-facing sensors and deployed a Random Forest signal classifier to production.
- Developed software architecture for an LED Matrix, integrating hardware and application layers.

EDUCATION

MEng Engineering and Architectural Design (2:1) – UCL - London, UK 2019 – 2024

- Dissertation: Methods for applying 2D Architectural Styles to 3D Architectural Models through Machine Learning.
- Published in the Bartlett Show 2022 Book for interdisciplinary parametric design and architecture work — sole student selected from the third year.
- Relevant coursework: Advanced Mathematics & Modelling, Machine Learning on Arduinos, C# for Design.

“Mihai Eminescu” National College – Satu Mare, Romania 2011 – 2019

- Diploma de Bacalaureat: 97% Physics, 94% Mathematics, 91% Romanian Literature.

SKILLS

Languages: Python (advanced — NumPy, asyncio, pytest-asyncio), SQL, C/C++, Java, MATLAB, C# (beginner/intermediate)

ML / Quant: RAG systems, vector search (HNSWLib), LLM evaluation, statistical modelling, error-function optimisation, time series analysis, predictive modelling, neural networks (CNNs, RoBERTa), process mining

Infrastructure: AWS (EKS, S3), Terraform, Docker, Kubernetes/Helm, Litestar, GraphQL (Strawberry/Apollo), Azure OpenAI, Next.js 15 / React 19

Mathematics: Advanced calculus, linear algebra, statistical analysis, applied physics

LEADERSHIP & VOLUNTEERING

VP / Treasurer – UCL Artificial Intelligence Society 2021 – 2024

- Co-organised ClimateHack.AI, a global competition on AI-driven carbon reduction; coordinated 100 participants across Boston and London finals.
- Managed a £100,000 budget and a 23-person committee; designed educational workshops with leading AI researchers.