

Alessandro Abati

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AI Engineer specialized in **Generative AI**, **Cloud**, and **Machine Learning**.

WORK EXPERIENCE

London Stock Exchange Group (LSEG) | *AI Platform Engineer* | London, UK Oct 2024 – Present

Designed and built AI-powered solutions to enhance developer productivity, secure AI adoption, and cloud migration.

- Developed AI-driven tools to improve developer experience and accelerate secure cloud adoption, including MCP-based automation of compliant infrastructure-as-code (IaC) generation.
- Contributed to the AI Experimentation Platform, enabling safe and policy-compliant generative AI use across the organization; supported users and tested new capabilities.
- Prototyped and shared emerging AI technologies to promote innovation and scale AI adoption within Engineering and beyond.

BIP xTech | *Data Analyst* | Milan, Italy Jan 2022 – Aug 2023

Led data quality enhancement and strategic data framework development initiatives.

- Analysed data structures and orchestrated automatized data cleaning pipeline, increasing administrative data quality by 26% in given time frame.
- Designed a long-lasting data strategy framework, collaborating with Data Office Head and stakeholders.
- Developed internal audit process for Data Governance improvements. Analyzed data life-cycle and provided critical insights for enhancing data quality.

Research Program | *Physics Data Analyst* | CERN, Geneva, Switzerland Oct 2019

Involved in founded program to develop machine learning model at world leading center for particle physics research.

- Implemented deep neural network model to classify physics events associated with Higgs boson production in CMS.
- Introduced Bayesian approach to hyperparameters optimization for first time in research team.

PROJECTS PORTFOLIO

BingAI Voice Assistant with FaceID Login | *Python, speech-recognition, AWS, face-recognition, API*

- Leveraged speech recognition, text-to-speech synthesis, and AI chatbot integration to develop voice assistant solution.
- Designed secure FaceID login system using facial recognition for personalized user authentication.

Bayesian Optimizer with Gaussian Process Regression | *Python, NumPy, scipy, Matplotlib, OOP, Git/GitHub*

- Created well-structured code-base for Bayesian Optimization using Gaussian Process Regression modeling.
- Expertly employed concepts such as mean and covariance functions and negative log-likelihood loss to guide optimization process efficiently.

ACADEMIC RESEARCH

Abstractive Text Summarization with LLM Model | *PyTorch, HuggingFace, Python, ETL, NLP*

- Created robust ETL data pipeline for data preprocessing (tokenization, statistics extraction) and ingestion.
- Developed BERT-based model (LLM) to produce relevant summaries from news and articles. Adapted BERT transformer model to fit task through employment of expressive embeddings and adaptive loss function.

Vincent van Gogh forgeries detection | *PyTorch, Fine-tuning, attention mechanism, contrastive learning*

- Fine-tuned several CNN architectures on curated art datasets, achieving high F1-scores in classification tasks.
- Used attention mechanisms, enhancing performance and interpretability through attention weights visualization.
- Implemented supervised contrastive learning to improve differentiation between authentic and forged artworks.

EDUCATION

MSc Artificial Intelligence | City, University of London First class

Bachelor of Physics and Astrophysics | University of Florence First class