

# Bharat Ram Ammu

Analytics Manager at Interactive Brokers

(+44) 7310 556 809

[linkedin.com/in/bharatramammu](https://www.linkedin.com/in/bharatramammu)

[ammubharatram.github.io](https://github.com/ammubharatram)

**Nationality:** Belgian

**Driving License:** B (Belgium)

[ammubharatram@gmail.com](mailto:ammubharatram@gmail.com)

[github.com/ammubharatram](https://github.com/ammubharatram)

**Location:** London, United Kingdom

## Objective

Data science leader with 7+ years of experience in deploying AI solutions that reduce operational risk and drive measurable business impact. Proven track record in building and scaling machine learning models with a strong focus on compliance, model governance, and responsible AI practices.

## Skills

- Generative AI: Prompt Engineering, RAG Pipelines
- LLM Integration (OpenAI, Gemini, Groq API)
- LLM Evaluation: BERTScore, Prompt output quality review
- GCP (3+ yrs): Vertex AI, Cloud Run/Functions, Pub/Sub, Compute Engine, GKE
- CI/CD: Bitbucket Pipelines, GitHub Actions
- Version Control: Git, Bitbucket
- Python (10+ yrs), Flask
- ML Pipelines: KubeFlow, MLFlow, Docker
- SQL, Neo4j (Graph-based modeling)

## Work Experience

### Model Governance and Analytics Manager

*Feb 2025 – Present*

Interactive Brokers, London, United Kingdom (Hybrid)

- Leading governance, validation, and tuning of AML, Trade Surveillance, and Sanctions models—spanning machine learning, rule-based, and GenAI-based approaches.
- Conducting in-depth financial crime analytics and model performance validation using Python and SQL.
- Optimizing detection thresholds to balance regulatory risk exposure with operational false-positive rates.
- Ensuring full compliance with internal governance frameworks and evolving regulatory expectations for AI/ML and GenAI models.
- Initiated LLM output evaluation process using BERTScore and qualitative metrics, contributing to LLM-as-a-judge pipelines for GenAI model validation.

### Head of Data Science

*April 2023 – Feb 2025*

Complidata, Tervuren, Belgium

- Led development and product management of the FCRR platform, collaborating with product owners and cross-functional squads to deploy machine learning pipelines, improving model efficiency by 15% and reducing false positives by over 30%.
- Adapt AI strategy with broader business objectives, ensuring that data science initiatives contributed to compliance, risk reduction, and measurable business outcomes.
- Managed and mentored the data science team, increasing productivity by 20% through workflow optimization, while overseeing resource allocation and long-term AI strategic planning.

### Data Science Consultant

*April 2022 – April 2023*

Complidata, Tervuren, Belgium

- Delivered strategic consulting, optimizing machine learning models to improve the efficiency of financial crime risk detection, reducing review times by 15%.
- Developed and deployed explainable ML models, lowering false positives in money laundering detection, leading to a reduction 10% in manual investigations.
- Collaborated with cross-functional teams to integrate data insights into business strategies, boosting decision-making speed and accuracy.

### Senior Data Scientist

*January 2019 – April 2022*

Complidata, Tervuren, Belgium

- Pioneered model explainability research using LIME and SHAP, reducing false positives by 30-70% for AML compliance and KYC PEP/Sanctions screening.
- Developed an automated narrative generation tool for ML outputs, increasing client trust by 25%, as per feedback from AML investigators.
- Built a user-friendly ML product using Flask and Kubeflow, enabling non-technical users to manage ML pipelines with customizable classification models.
- Led the development of network risk scoring models using Neo4j, reducing risk exposure by 10%.

### Junior Data Scientist

*April 2017 – Dec 2018*

Complidata, Tervuren, Belgium

- Developed ML models and analytics solutions, reducing manual data analysis efforts by 15% and improving report generation efficiency.
- Automated alert investigations using web scraping with Selenium, enhancing Customer Due Diligence (CDD) workflows as part of KYC.
- Published a master's thesis in collaboration with Complidata, optimizing false positives for AML compliance using interpretable ML models.

### Data Analyst

*Jul 2014 – Aug 2015*

Mjunction Services Ltd. Kolkata, India

- Analyzed secondary steel product prices using statistical techniques to identify market trends and pricing patterns.
- Supported strategic decision-making by delivering actionable insights through data-driven reports and visualizations.
- Collaborated with cross-functional teams to develop effective price estimation strategies using linear regression.

## Education

### Master of Science in Statistics

*2016 – 2018*

KU Leuven, Belgium — a globally ranked university consistently in the top 50

### Bachelor of Technology in Metallurgical & Materials Engineering

*2010 – 2014*

National Institute of Technology (NIT), Warangal, India

## Key Projects

- **Transaction List Sanctions Screening Optimization (TLS):** Clients: Belfius Brussels, BNP Paribas Paris
- **Transaction Monitoring Optimization (TMO):** Clients: Allied Irish Bank, Raiffeisen Bank, Commerz Bank
- **Name Screening Optimization:** Clients: Belfius Belgium, GPM France, Klaesia Insurance France
- **Open-Source Intelligence (OSINT):** Client: DLL Netherlands

- **GenAI RAG Pipeline for Regulatory Document Q&A:** Built a LangChain-based Retrieval-Augmented Generation pipeline using FAISS, embedding models, and prompt templates; optimized for finance-specific document search and summarization.
- **LLM Evaluation Framework (BERTScore):** Evaluated LLM output quality using BERTScore and custom prompt-based benchmarks, contributing to LLM-as-a-judge methodology for evaluating GenAI tools used for ad hoc investigation, assisting Compliance officers.
- **LLM Fine-tuning and API Integration:** Fine-tuned LLaMA, Gemini, and OpenAI models using Groq and Gemini APIs for classification, summarization, and KYC/AML customer risk scoring and profiling tasks.

## Languages

---

- |                                   |                                 |
|-----------------------------------|---------------------------------|
| • <b>English:</b> C2 (Proficient) | • <b>Hindi:</b> C2 (Proficient) |
| • <b>Dutch:</b> A2 (Intermediate) | • <b>Telugu:</b> C2 (Native)    |
| • <b>French:</b> A1 (Beginner)    |                                 |