Thomas Iqbal Khan-Bellanger

Data Science Master's Student | Machine Learning and Computational Statistics
Université libre de Bruxelles (ULB) – Faculty of Science
Languages: English (Native, C2), French (Native, C2), German (Fluent, C1)
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Education

M.S. in Data Science *2024 – Present*
Université libre de Bruxelles (ULB) – Faculty of Science
- Relevant Coursework: Machine Learning, Time Series, Computational Statistics, Big data Algorithms
- Project:
    - Spotify Playlist Challenge – Analysing track similarity
    - Replication of (Neural Random Forest) using TensorFlow.

M.S. in Economics (Cum Laude, 15.5/20) *2019 – 2021*
Solvay Brussels School of Economics & Management

B.S. in Economics *2014 – 2019*
Solvay Brussels School of Economics & Management
- Minor in Analysis (Statistics and Econometrics)

Work Experience

Senior Associate *03.2024 – 10.2024*
KPMG – Risk and Treasury
- Developed an automated tool in VBA to analyse currency positions, identify gaps, and quantify exposure to basis risk for regulatory reporting.
- Reviewed and validated calculations of Economic Value of Equity (EVE) and Net Interest Income (NII) during IRRBB inspections, ensuring accurate implementation of supervisory methodologies.
- Improved transparency and management of interest income streams by implementing Funds Transfer Pricing (FTP) in a significant German bank.

Supervisory Analyst *09.2021 – 09.2023*
European Central Bank – DG-OMI (On-site Model Inspections)
- Designed and deployed scalable infrastructure, (CML, GitLab, AWS), for automated data flows, reducing manual intervention and integrating processes with Tableau for streamlined reporting and analysis.
- Developed Python-based ETL pipelines on CML instances linked to AWS databases, reducing data reporting times by 80% and improving data reliability.
- Built prototype-level NLP tools for text parsing, including vectorisation (TF-IDF, cosine similarity) to support semantic analysis in internal reporting.
- Improved documentation and reducing operational inefficiencies by standardising processes and enhancing data quality.

Trainings and competencies

ECB training Fundamentals in Machine Learning (2022), EdX by GeorgiaTech: Python Programming (2021), and ECB-SMM Market Risk training (2022).

Programming Languages:
- Python (4 years)
- SQL (3 years)
- R (2 years)
- VBA (1 year)
- C++ (1 year)

DS and ML:
- Tableau
- Dash
- scikit-learn
- TensorFlow
- PyTorch
- spaCy
- NLTK
- Apache Spark
- Docker
- Git