## Amosh Balami

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#### Education

**University of Greenwich** 

London, UK 2022 - 2025

BSc Computer Science

- Awarded First Class Honours
- Final Year: JVM Programming Languages (92%), HCI & Design (81%), Final Year Projects (80%), Machine Learning (69%)
- Second Year: Computational Methods and Numerical Techniques (87%), Operating Systems (86%), Advanced Programming (73%), Introduction to Artificial Intelligence (70%)
- First Year: Mathematics for Computer Science (99%), Introduction to Compilers (89%)

## **Skills**

### **Programming Languages:**

Python (Proficient), Java (Familiar), Kotlin (Familiar), HTML (Basic), CSS (Basic), JavaScript (Basic), R (Academic use)

#### **Software Engineering & Tools:**

Git & GitHub, GitHub Actions, VS Code, Linux Command Line, OOP (Java, Python), REST APIs, Flask (Familiar), Docker (Basic), PostgreSQL (Basic), Selenium, Virtual Environments (venv), Jupyter Notebook, UV (Exploring)

#### **Data Science & Machine Learning:**

Pandas, NumPy, Scikit-learn, XGBoost, SVM, Random Forest, Logistic Regression, Feature Engineering, Time Series Forecasting, GridSearchCV, Model Evaluation (R<sup>2</sup>, MSE, RMSE, MAE, F1)

## Deep Learning & NLP:

TensorFlow, LSTM, BERT, FinBERT, Hugging Face Transformers, Tokenisation, Sentiment Analysis, Text Classification

#### **Data Handling & Formats:**

CSV/JSON, SQL/PostgreSQL (Basic), Pandas DataFrames, MetaTrader5 API (Forex data, MQL5)

#### **Visualisation & Analysis:**

Matplotlib, Seaborn, Plotly, ggplot2 (R), Statistical Analysis (t-test, Shapiro-Wilk, Wilcoxon)

### **Projects**

# Final Year Project – Deep Learning Forex Forecasting & Trading Signal System:

GitHub

- Built a full-stack EUR/USD forecasting pipeline combining LSTM models, Bayesian optimisation, and ensemble learning.
- Engineered 40+ features from technical indicators, FinBERT sentiment, and macroeconomic events
- Achieved  $R^2 > 0.70$  and generated actionable buy/sell signals with **backtested trading strategies** (Sharpe, drawdown, profit factor).
- Integrated MetaTrader 5 API, web scraping, and advanced evaluation metrics into a reproducible Python project

## Sentiment Analysis with BERT – IMDb Reviews:

<u>GitHub</u>

- Fine-tuned bert-base-uncased for binary sentiment classification on IMDb reviews
- Achieved 92.86% accuracy and 92.98% F1-score using Hugging Face Transformers and PyTorch
- Built an end-to-end pipeline: tokenisation, model training, and inference with confidence thresholding
- Evaluated performance on sarcastic and ambiguous examples to analyse model limitations

## **MST-Based Telecoms Optimisation – Kotlin Graph Project:**

GitHub

- Implemented Kruskal's Algorithm and Union-Find for cost-efficient telecom network simulation
- Wrote modular Kotlin code for graph construction, pathfinding, and cost analysis
- Demonstrated strong grasp of graph theory, OOP, and functional design patterns

# **Machine Learning Regression & Classification (Titanic & Housing):**

*GitHub* 

- Built and compared Random Forest, Decision Tree, and Logistic Regression models
- Used GridSearchCV, cross-validation, and metrics like MSE, RMSE, R2, Accuracy, F1
- Worked with real datasets (Titanic & California Housing) and interpreted model results

#### Java Client-Server Distributed System with Coordinator Election:

**GitHub** 

- Developed a multi-client server with messaging, dynamic coordinator logic, and reconnection support
- Used sockets, multithreading, and CLI I/O
- Designed and tested modular classes (Server, ClientHandler, Coordinator) using Junit

## Statistical Analysis in R – Mice & Rats Study:

**GitHub** 

- Analysed weight changes using paired t-tests, Wilcoxon, and Shapiro-Wilk
- Fitted Weibull, Gamma, and Lognormal distributions and evaluated AIC/BIC
- Visualised patterns via boxplots, density curves, QQ plots

# **Work Experience**

SEO London London, UK

Tech Developer 2023 intern <u>GitHub</u>

June 2023 - Aug 2023

- Designed and developed a new website using HTML5, CSS3, JavaScript, Flask, Python, SQLAlchemy, and GitHub.
- Created features for novice forex traders, integrating candlestick data charts via an API with over 100 datasets, and implemented indicators like the Simple Moving Average (SMA).
- Actively participated in team meetings to present progress reports, showcase milestones, and share insights.
- Assisted interns in debugging, code reviews, and testing, enhancing practical skills in the development lifecycle.

Burger King London, UK

Shift Manager - Youngest Manager in Lewisham branch

Dec 2021 - Oct 2022

- Provided training materials for Crew Supervisors, enhancing future management roles within the organisation.
- Ensured timely and accurate reporting to the head office using MS Office tools (Excel, Outlook, Word).
- Improved customer satisfaction, contributing to an 8% increase in positive feedback.

### **Extra Curriculum**

# **Bright Network**

London, UK

<u>IEUK 2024:</u> Technology - 4-day virtual internship

17 - 20 Jun, 2024

- Engaged in hands-on projects, workshops, and webinars on cutting-edge technologies.
- Gained insights into real-world problem-solving while networking with industry professionals.
- Acted as Project Manager in a workshop to create a PowerPoint plan, managing resources including a Front-End Developer, Back-End Developer, and UX Designer.

Nomura London, UK

Hackathon - Deepracer

28 Jun, 2023

- Collaborated to create a competitive DeepRacer model, securing 4th place among 20 teams.
- Gained experience in reinforcement learning (RL), computer vision, and teamwork in a high-stakes environment.

## **Lloyds Banking Group**

London, UK

<u>Start Your Journey 2023</u> - Technology and Data

21 - 22 Jun, 2023

- Collaborated with peers to brainstorm and develop the concept of cloud banking in the context of digital transformation.
- Proposed personalised spending insights and budgeting tools to enhance customer financial awareness.
- Gained an understanding of technology and data's role in shaping future banking trends.

### **Additional Information**

Languages

- Nepali (Native), English (Fluent), Japanese (Beginner)

Associates

- SEO London (candidate), British Computer Science Society (Member)
- **Certificates** IBM AI Developer Professional Certificate (Coursera 2024) <u>Verify</u> Microsoft Azure AI Fundamental AI-900 (Microsoft 2024) <u>Verify</u>

Python Programmer (Python Institute – 2022) - Verify

Python Essential 1 (Cisco – 2022) - Verify

**Interests** 

- Basketball, Video Games, Gym