

# Amosh Balami

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## Education

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### University of Greenwich

London, UK

BSc Computer Science

2022 - 2025

- 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

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### Programming Languages:

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

### 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

### Data Science & Machine Learning:

Pandas, NumPy, Scikit-learn, XGBoost, SVM, Random Forest, Logistic Regression, Feature Engineering, Time Series Forecasting, GridSearchCV, Model Evaluation ( $R^2$ , 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

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### 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:

[GitHub](#)

- 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,  $R^2$ , 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**

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**SEO London****London, UK***Tech Developer 2023 intern**June 2023 - Aug 2023*[GitHub](#)

- 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**

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**Bright Network****London, UK***[IEUK 2024](#): 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***[Start Your Journey 2023](#) - 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**

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**Languages**

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

**Associates**

- SEO London (candidate), British Computer Science Society (Member)

**Certificates**

- IBM AI Developer Professional Certificate (Coursera – 2024) - [Verify](#)  
 Microsoft Azure AI Fundamental AI-900 (Microsoft – 2024) - [Verify](#)  
 Python Programmer (Python Institute – 2022) - [Verify](#)  
 Python Essential I (Cisco – 2022) - [Verify](#)

**Interests**

- Basketball, Video Games, Gym