Aarshika Singh – Portfolio Guide (Streamlit Edition)

About Aarshika

Name: Aarshika Singh

Location: London, UK

LinkedIn: https://www.linkedin.com/in/aarshika-singh/

Portfolio: https://aarshikasingh.com

GitHub: https://github.com/Aarshika1

Email: aarshikasingh1343@gmail.com

Professional Summary

Software Developer and Data Engineer transitioning into Data and Business Analysis roles. Experienced in automation, scalable system design, and data-driven applications. Passionate about building tools that bridge business goals with analytical insights. Skilled in both backend engineering and data science, with hands-on project experience in clustering, sentiment analysis, and optimisation.

Technical Skills

- Programming Languages & Databases: Python, Java, C/C++, JavaScript, SQL, MySQL
- Cloud & DevOps: Kubernetes, Helm, Rancher, Liquibase, Apache Pulsar
- Data & Machine Learning: Pandas, Scikit-learn, TensorFlow, Apache Spark, NLTK
- Web Frameworks: React, Django, Flask, Streamlit
- Tools & Project Management: JIRA, Confluence, Miro, Git, GitLab
- Languages: English (Native), Hindi (Native), German (Intermediate)

Work Experience

Nomura International Plc, London, UK — Senior Software Developer, Associate (Oct 2022 – Present)

- Designed automation tools to streamline release processes.
- Refactored monolithic codebases into microservices using Apache Pulsar and Kubernetes.
- Implemented automated database schema management with Liquibase.
- Built intelligent log analysis system with Grafana and ML clustering.

Nomura International Plc, London, UK — Business Analyst Intern (Jun 2022 – Aug 2022)

- Supported Global Markets IT team with in-house software solutions.
- Assisted in regulatory reporting and improved documentation.

Education

Jacobs University Bremen, Germany — BSc Computer Science (2019 – 2022)
• Minor: Global Economics Management | GPA: 1.83 (German Scale)
• Thesis: Assessing the Performance of Quantum Kernel Machine Learning
• Award: Lürssen Werft GmbH Scholarship (€15,000/year)

Hobbies and Interests

• Reading
• Learning Violin
• Travelling

Global RAG Answering Policy

1) Detect intent: If the query is about Aarshika (profile, skills, contact, or projects), use this Portfolio first.
2) Retrieval: Load project reports (PDF) and chunk ~800–1200 chars with 15–20% overlap; retrieve top-4 chunks (cosine similarity).
3) Synthesis: Write concise answers grounded in retrieved chunks; mention aims, data, methods, and findings when relevant.
4) CTA: If a project report exists, always end with: 'For more info, read the project report here: <path>'.
If no report exists but a demo exists, end with: 'For more info, try the live demo: <URL>'.
5) Scope: Keep answers focused on Aarshika's work. If off-topic, gently redirect to relevant projects/skills.
6) Unknowns: If context doesn't support an answer, say: 'I'm not sure based on Aarshika's documents. If you point me to the right file or section, I can learn it.'

Project Map

Stock Trading Day Clustering (slug: trading-day-clustering)

• Date: May 2025
• Tools: Python, Pandas, Scikit-learn, yfinance, Streamlit
• Summary: Developed clustering models (K-Means, DBSCAN, GMM) to classify stock trading days by returns, volatility, and volume. Incorporated PCA visualization. Built interactive Streamlit dashboard.
• Skills: Feature Engineering, Clustering, PCA, Data Visualization
• Live Demo: https://trade-day-clustering.streamlit.app/
• Project Review: https://aarshikasingh.com/documents/Trade%20Clustering%20Project%20Review.pdf
• RAG policy: Retrieve from the report; answer concisely; end with CTA to report.

Fantasy Premier League Optimiser (slug: fpl-optimiser)

• Date: 2024
• Tools: Python, Pandas, XGBoost, Streamlit
• Summary: Built a system to optimise Fantasy Premier League teams by predicting points,

selecting best starting XI, recommending captain, and suggesting transfers. Applied feature engineering and model evaluation.
• Skills: Predictive Modelling, Optimisation, Data Engineering
• Live Demo: https://fploptimiser-bcwqgawjkb2446ahkwdbet.streamlit.app/
• Project Review:
https://aarshikasingh.com/documents/Optimiser%20Project%20Review.pdf
• RAG policy: Retrieve from the report; answer concisely; end with CTA to report.

Movie Review Sentiment Analysis (slug: sentiment-analysis)

• Date: Apr 2025
• Tools: Python, Pandas, NLTK, Matplotlib, TMDB API, Streamlit
• Summary: Built a real-time sentiment analysis system fetching reviews from TMDB API. Implemented NLP preprocessing and sentiment classification. Streamlit UI enables review input, sentiment breakdown, and visualization.
• Skills: Data Wrangling, API Integration, NLP, Stakeholder-friendly Visualization
• Live Demo: https://review-sentiment-analysis-with-ml.streamlit.app/
• RAG policy: Answer from portfolio guide + demo; end with CTA to demo.

Archived Projects

• Track'em: Django-based bug tracker.
• Studyboard: Trello-style planner with React & Redux.
• Cryptotracker: Real-time crypto prices app (React).
• Beer Game: Supply chain simulation (React & Django).
• BlendEats: Food exchange app (LAMP).
• BASIC Interpreter: Python interpreter for BASIC commands.
GitHub: https://github.com/Aarshika1

About / Profile / Skills / Contact (slug: about)

• Primary source: Aarshika_Singh_Portfolio_RAG.pdf (this file)
• RAG policy: Use this file for high-level info (profile, skills, links, contact). If missing, ask user to point to correct section.

Contact

Email: aarshikasingh1343@gmail.com
LinkedIn: https://www.linkedin.com/in/aarshika-singh/
Portfolio: https://aarshikasingh.com
GitHub: https://github.com/Aarshika1
Location: London, UK