

AARSHIKA SINGH

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EXPERIENCE

Nomura International Plc, London, United Kingdom - *Financial Services*

Oct. 2022 - Present

Senior Software Developer, Associate: Global Markets IT Team (Trade Processing)

- Designed and implemented automation tools to streamline and enhance the software release process, reducing deployment time and minimizing human error.
- Spearheaded a proof-of-concept to refactor monolithic codebases into microservices, utilizing Apache Pulsar for efficient data streaming and Kubernetes with Helm for scalable deployment on Rancher.
- Implemented an automated database schema management system using Liquibase, improving efficiency in schema versioning and database migrations.
- Initiated and currently developing an intelligent log analysis system integrating Grafana logs from EKS with machine learning clustering to identify log patterns, support predictive diagnostics, and reference past resolutions.

Nomura International Plc, London, United Kingdom - *Financial Services*

Jun. 2022 - Aug. 2022

Business Analyst: Global Markets IT Team

- Assisted the business analyst team in developing and maintaining in-house software solutions for the global markets division.
- Contributed to regulatory reporting, performed sanity checks, and improved code documentation.

Max Planck Institute, Bremen, Germany - *Research*

Student Assistant: Data management and Stewardship

Sept. 2021 - Feb. 2022

- Improved research efficiency by 26% by contributing to an international ocean biodiversity observatory network, curating datasets for scientific analysis.
- Collaborated with researchers in Hawaii Ocean Time Series project to review datasets and literature.

EDUCATION

Jacobs University Bremen, Bremen, Germany

Sept. 2019 – Jun. 2022

Bachelor of Science, Computer Science

- **Study Minor:** Global Economics Management.
- **GPA:** 1.83 (German scale).
- **Relevant courses:** Algorithms and Data Structures, Software Engineering, Operating Systems, Robotics, Microeconomics, Macroeconomics, Developmental and Environmental Economics.
- **Awards:** Lürssen Werft GmbH Scholarship (€15,000 per year).
- **Thesis:** Assessing the performance of Quantum Kernel Machine Learning.

PROJECTS

Movie Review Sentiment Analysis Using TMDB API

Personal Project | Python, Pandas, NLTK, Matplotlib, TMDB API

Apr. 2025 – Present

- Developed a data pipeline to fetch movie reviews using the TMDB API and perform real-time sentiment analysis.
- Preprocessed text data using NLP techniques (tokenization, lemmatization, stopword removal).
- Conducted sentiment classification using rule-based and ML-based approaches, generating insights on viewer perception.
- Designed an interactive UI to allow users to input movie names or IDs and visualize sentiment breakdown and review clusters.
- Project goal: demonstrate skills in data wrangling, API integration, EDA, and stakeholder-friendly data storytelling.

SKILLS AND ACHIEVEMENTS

- **Programming Languages and Databases:** Java, C/C++, Python, SQL, JavaScript, MySQL.
- **Cloud & DevOps:** Kubernetes, Helm, Rancher, Liquibase.
- **Project Management & Collaboration:** JIRA, Confluence, Miro.
- **AI & Machine Learning:** Scikit-learn, TensorFlow, AI-driven testing, Advanced web research and information retrieval.
- **Languages:** English (Native), Hindi (Native), German (Intermediate).