

# Joy Almeida

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## Experience

### Software Engineer | Barclays, Pune, India | July 2023 - Present

- **Implemented an ETL pipeline** to process real-time data from Kafka, apply transformations using AWS Lambda, and load it into AWS Athena, reducing data processing latency from 15-minute batch intervals (5-7 minutes per job) to 10-12 milliseconds for near real-time insights.
- **Automated** DQR report and Excel sheet generation post-pipeline completion using **Python and VBA**, streamlining regular reporting processes.
- Migrated projects from a traditional **Hadoop** environment to **Kubernetes**, improving stability and flexibility in handling workloads.
- Worked on the migration of legacy workflows to **Apache Airflow** and built new data ingestion pipelines using Airflow DAGs for scheduling and monitoring.
- Refactored pipelines to be modular, testable, and production-ready, introduced **unit testing**, and integrated **Great Expectations** for robust data validation.
- Built a **PySpark-based data validation tool** to ensure accuracy and consistency during ingestion of **unstructured** data from source into **structured** storage systems, helping catch schema mismatches and content-level discrepancies.

## Freelancing

- **AsyncAPI** - Developed AsyncAPI solutions to demonstrate Event-Driven Architecture and pub/sub model using Kafka.
- **GeeksforGeeks** - Wrote technical articles covering diverse topics like Python, JavaScript, REST, and Design Principles.

## Technical Skills

- **Languages:** JavaScript, Python, Golang, Java, SQL, C++.
- **Libraries and Frameworks:** Node, Flask, Django, REST, ReactJS, NextJS, Bootstrap.
- **Tools:** MongoDB, MySQL, Git, Github, Postman, Docker.
- **Knowledge:** OOPS, Data Structures & Algorithms, DBMS, Machine Learning.
- **Cloud Technologies:** AWS EC2, AWS Lambda, AWS S3, AWS Athena, AWS DynamoDB, AWS RDS.

## Achievements

- **2nd Runner-up in EthIndia 2024 under the Anon Aadhar track.**
- **Winner in Odoo Combat 2024** ([certificate](#)), a hackathon hosted by Odoo, with 900 teams.
- **Winner in Barclays Global Internal Hackathon 2024.**
- **Winner in EthIndia 2023** ([link](#)), the world's largest Ethereum Blockchain hackathon.
- **Winner in Smart India Hackathon 2022** ([certificate](#)), a national-level hackathon hosted by the Gov. of India
- **Winner in IBM Hack Challenge 2022** ([certificate](#)), a hackathon hosted by IBM, with 20,000+ enrollments.

## Publications

- **Voice-Assisted Image Captioning and VQA For Visually Challenged Individuals**  
Feb 2023 | DOI: [10.1109/INDICON56171.2022.10040196](https://doi.org/10.1109/INDICON56171.2022.10040196)
- **Time Frame Analysis for Sentiment Prediction of Stock Based on Financial News Using Natural Language Processing**  
July 2023 | DOI: [10.1109/ICAIA57370.2023.10169730](https://doi.org/10.1109/ICAIA57370.2023.10169730)

## Projects

- **Rush Estimator** | [Github](#) - Developed a deep-learning-based app for footfall analysis, revenue prediction, and inventory management with an IBM Watson-powered chatbot for enhanced user experience.
- **Aide** | [Github](#) - Built a mobile app using Flutter that assists visually challenged individuals with image captioning and Visual Question Answering (VQA), featuring audio cues, gesture controls, and multi-language support.
- **Jarvis - Decentralized Expense Tracker** | [Github](#) - Built a blockchain-powered expense tracker with chart visualizations and support for text and speech input, including 100% test coverage for smart contracts using Chai and Mocha.

## Education

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| • <b>Sardar Patel Institute of Technology</b>                   | <b>Oct 2020 – Jun 2023</b> |
| <b>B.Tech.</b> in Information Technology (CGPA of <b>9.13</b> ) | Mumbai, India              |