

Koustav Mallick

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Professional Experience

Deutsche Bank

Jul 2019 – Aug 2023

Senior Software Engineer (Big Data) | Agile, Spark, Scala, GCP, Airflow, Bash, Maven, SQL, Python

- **Generated over \$3M annual savings and increased data processing efficiency by 53.92%** by leading the development of a **GCP-based, maintainable and automatic** decision engine using Spark Scala and Maven. Earned the India Excellency Award for this groundbreaking work.
- **Reduced development time by over 40 hours monthly for 16 teams** by designing and implementing an **Airflow DAG Generator** using Python and Maven. Facilitated knowledge-sharing sessions and provided training to ensure seamless adoption across teams.
- **Saved over \$1M of annual revenue, eliminated COGNOS licensing costs and streamlined report delivery** by developing a **scalable report handler** system using Python, Java(Spring-Boot), Maven and SQL. Led requirements gathering sessions, coordinated with cross-functional teams, and ensured timely delivery of the reporting solution.
- **Enhanced performance time by 40% and decreased fallback time by 20%** by building **maintainable, robust and auto-configurable** data pipelines using Spark and Apache Kafka.
- **Reduced cost of \$3M of annual revenue over Control-M licensing by creating “Orchestrator”**, an in-house scalable job scheduler to **automate script running while maintaining order of execution** using **Java(Spring-boot and webservices)** and **SQL**.

Technical Skills

Big Data: Apache Spark, PySpark, Hadoop, Hive, Apache Airflow, Apache Kafka, Tableau

Cloud: GCP (Certified Architect), AWS, BigQuery, DynamoDB, AWS Lambda, Cloud Functions, Kubernetes, S3, Kinesis

Languages: Python, Java, Scala, JavaScript, C++, Bash, SQL

Technologies: Maven, Spring Boot, Git, Microservices, RESTful Web Services, GitHub Actions

Tools: Excel, Confluence, Atlassian JIRA, GitHub, BitBucket(Git), ssh, telnet

Education

Purdue University

Master of Science in Computer Science (GPA: 4.00 / 4.00)

Aug 2023 - May 2025

Jadavpur University

BE in Electronics and Tele-Communication (GPA: 8.00 / 10.00)

Jul 2015 – May 2019

Educational Experience

Purdue University

Sep 2023 – Present

Graduate Research Assistant

- **Med-GPT** - Helped local physicians and medical students by developing an GPT-based Expert System to determine the type of cardiovascular disease and proposing possible solutions to it.

Developer – PUCS ChatBot | *React.js, Flask, PyTorch, TensorFlow*

- Improved response time for Purdue University Computer Science's ChatBot by 30% by designing and building it using Google PaLM and FAISS. This chatbot also utilized a responsive UI implemented with React.js and Flask.