Rounak Khapre

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PROFESSIONAL EXPERIENCE

IITIAN INFOTECH   **Oct 2023 - Nov 2024**
Software Development Intern(full-time role)   **Python, java, AWS, MERN stack**

- **Designed and implemented** a **high-performance data pipeline** using **Apache Kafka** and **Apache Spark**, processing large-scale data in **real-time** and **batch** modes, achieving high throughput and low-latency performance.
- **Engineered a scalable, cloud-native solution** leveraging **AWS Lambda**, **Kinesis**, and **S3** to facilitate seamless data integration and **dynamic scaling** of processing workloads for real-time data analysis.
- **Optimized data transformation** and **aggregation processes**, improving pipeline performance by **10x** and reducing latencies by **40%**, enabling faster decision-making for business users.
- **Developed and deployed automated error-handling** and **data quality checks**, ensuring **reliable data processing** with minimal downtime, and maintaining consistent data flow across the system.
- **Collaborated in CI/CD pipeline setup** for continuous integration and **automated testing**, enhancing the efficiency of code deployment and improving the overall **development lifecycle**.

ACADEMIC PROJECTS

SkyCast: Instant Weather Predictions   **Python, OpenWeatherMap API, Tkinter, CLI/GUI Integration, JSON Parsing**

- **Developed a weather forecasting application** using **Python** and integrated the **OpenWeatherMap API** to retrieve real-time weather data for any location.
- Designed a **user-friendly GUI** with **Tkinter**, allowing users to easily input locations and view detailed weather information such as **temperature**, **humidity**, and **weather conditions**.
- Utilized **JSON parsing** to process API responses and displayed **weather data** in an organized, readable format, ensuring clear communication of key details.
- Implemented **error handling** to manage potential issues such as invalid location inputs or API failures, ensuring a **smooth user experience**.

Developer Forum   **ReactJS, NodeJS, MongoDB, Google Auth**

- Designed and launched a dynamic, interactive developer forum using cutting-edge **MERN stack** technology to create a full-stack social network app for software developers.
- Developed and launched a full-stack social network app using **React**, **Redux**, **Node.js**, **Express**, and **MongoDB**, enabling extensive backend API creation powered by **Express.js**.
- Employed stateless **JWT authentication** practices to ensure secure user interactions, integrating **React** with an **Express** backend seamlessly.
- Utilized modern practices such as **React Hooks** and **Async/Await** for responsive and interactive user interfaces, with **Redux** managing state effectively.

DataFlowX: Real-Time Data Processing at Scale   **AWS (S3, Kinesis, Lambda) Apache (Spark, Kafka), CI/CD**

- Developed a high-performance **data pipeline** using **Apache Kafka** and **Apache Spark** to process large-scale data in real-time and batch modes, ensuring high throughput and low latency.
- Engineered scalable, **cloud-native architecture with AWS Lambda, Kinesis, and S3**, enabling efficient data integration and dynamic scaling of processing workloads.
- Implemented automated **error-handling and data quality checks, ensuring reliable, consistent data** across the pipeline with minimal downtime.
- Optimized **data transformation and aggregation processes, delivering real-time insights and improving data processing** speeds by 10x while reducing latencies by 40%.

EDUCATION

VMV COMMERCE JMT ARTS & JJP SCIENCE COLLEGE, NAGPUR (8.0/10)   **Aug 2022 - July 2024**
Master of Computer Applications.
Relevant Courses: Data Structures and Algorithms, Artificial Intelligence and Machine Learning, Cloud Computing, Data Analytics, Mobile Application Development

Prerna College of Commerce, Science & Art, NAGPUR (68.2%)   **Aug 2018 – Apr 2021**
Bachelor of Science in Information Technology
Relevant Courses: Data Structures, Design and Analysis of Algorithms, Operating Systems, Database Management Systems, Java Programming

SKILLS

Programming Languages	: Java, C , C++,DSA, PL/SQL, Python, JavaScript, Nodejs
Framework & Libraries	: Spring, Spring Boot, React, Angular, Django, Flask.
Databases	: PostgreSQL, MySQL, Oracle Database (Basic), MongoDB, Redis, Firebase
Networking	: RESTful API, gRPC, TCP, UDP, HTTP , WebSocket, Server-Sent Events, FCM, GraphQL
Cloud Technologies, Cloud Native and DevOps	: AWS Cloud (EC2, IAM, S3), Git, Jenkins, CircleCI, Docker, Kubernetes, Google Cloud, Heroku