

PAVAN VARMA BHUPATIRAJU

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EXPERIENCE

Barclays, Whippany, New Jersey

September 2023 – Present

- Designed and developed advanced **Kafka integration services** capable of processing approximately **6 million messages** daily, implementing custom producer listeners and Kafka **retry mechanisms** with exponential backoff for **high throughput** and **reliability**.
- Utilized **Kafka Streams** to match trades on Kafka topics with specific parameters, facilitating internal settlement trades.
- Applied **SOLID principles** and design patterns such as **Specification** and **Factory** to create modular, reusable microservices
- Developed mechanisms for **controlled replay of messages** using consumer group seek from specific timestamps, ensuring data integrity during **disaster recovery** scenarios.
- Developed stateful sets for **Prometheus** and **Kibana** to manage and store health metrics of services, **ensuring comprehensive monitoring** and observability.
- Utilized Kafka's native capabilities to implement **DLQ (Dead Letter Queue)** for handling and reprocessing failed messages, ensuring message reliability.

Informatica, Bangalore, India

August 2018 – July 2021

- Developed application using **Flask, React.js and Elastic Search** to effectively manage expenses for **AWS**. Features include on demand resource creation using **Kafka**, automated resource tagging and overspending alerts to leads.
- Upgraded existing Spring applications to **Spring Boot**, which decreased the development time significantly.
- Created an **Error classification system** using log analysis to identify exceptions and accountable developers during the product life cycle. Extended it to automatically resolve environment failures based on error analysis.
- Built application using **Spring Boot, Design patterns** to identify conflicting source and binary files in bug fixes prior to customer delivery. Improved reliability and reduced regressions at customer environments.
- Programmed major application modules using **PowerShell** and **Java** which enabled users to schedule and publish documents to SDL Tridion and increased the verification activities by 10%.
- Developed **Perl** scripts for Perforce webhooks to auto update Jira's with consumed build details.
- Optimized **database** queries and introduced **indexing** strategies, resulting in a 40% improvement in database response time and reducing server load, enabling efficient data retrieval for complex operations.
- Implemented robust ETL processes utilizing Informatica PowerCenter and custom scripts to **streamline data flow** and **enhance data integrity** across systems.
- Recognized for my **Innovative thinking** for introducing new process flows and automations.

SKILLS

Programming Languages: Python, Java, JavaScript, Bash, C/C++.

Web technologies: ReactJS, HTML, CSS, Bootstrap, AngularJS, Flask

Cloud Computing: AWS (Lambda, Cloud Formation, S3, Step Function, Dynamo DB, SQS, SES), GCP, Camunda 8

Databases: MySQL (PostgreSQL, Oracle B), NoSQL (Elasticsearch, MongoDB).

Frameworks & Libraries: Spring, Spring Boot, Spring MVC, Flask, PyCaret, TensorFlow.

Software/Tools: Git, Perforce, Jenkins CI/CD, Linux, Kubernetes, Docker, Splunk, Kibana, Postman, Jira, SDLC.

Soft Skills: Communication, Leadership, Collaborative, Problem-solving.

EDUCATION

New York University, Tandon School of Engineering, New York, NY

September 2021 – May 2023

Master of Science, **Computer Science**. GPA: 3.7/4

K L University, Vijayawada, India.

July 2015 – April 2019

Bachelor of Technology, **Computer Science and Engineering**. GPA: 8.8/10

PROJECTS

Real-Time Twitter Hate Speech Detection | PySpark, Kafka, Twitter API, Mongo DB, AWS EC2, AWS Lambda

- Implemented a scalable cloud native big data application using **Apache Kafka** messaging queue to stream and process tweets generated on Twitter in real time. Utilized **PySpark** for efficient real-time data processing & analysis at scale.

Forex Data Collection | Python, asynchronous, Multithreading, Multiprocessing, Kafka, MongoDB, PyCaret.

- Developed a real-time forex data collection system using the Polygon API, making parallel and concurrent API calls every second using **Multiprocessing** (to run multiple currency pairs at once) as well as **Multithreading** in python