

PRAKASH REDDY PASHAM

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SUMMARY

Results-driven Software Engineer with 2 years of experience designing and scaling high-performance backend systems for **14M+ users**. Expert in **Java, Spring Boot, and Kafka**, specializing in event-driven microservices architecture and system optimization that has cut infrastructure costs by **30%**. Passionate about leveraging AI/ML to solve complex problems and deliver impactful software solutions.

EXPERIENCE

PAYTM (One97 Communications Ltd), Software Engineer

Noida, India | Jun 2022 – Jun 2024

- **Improved system performance and efficiency** by integrating **Aerospike caching**, optimizing **Kafka consumers**, and enabling **asynchronous processing** — reducing infrastructure costs by **30%** and increasing throughput.
- **Developed and maintained Spring Boot microservices** for billing and consent management, achieving **97.6% API success rate** and enabling **automated bill-fetch** workflows for **14M+ users** via **event-driven architecture**.
- **Engineered secure, scalable systems** by implementing **AES-256 encryption** across credit card and mobile (postpaid/prepaid) data pipelines (**MySQL, Cassandra(NoSQL), Kafka**), securing data for **10M+ users** in alignment with **regulatory standards**.
- **Built reusable infrastructure components**, including a centralized **encrypted logging module** and **fault-tolerant scripts** that encrypted and migrated **15M+ legacy records** with **zero downtime**.
- **Established full-stack monitoring and alerting** using **Prometheus** and **Grafana**, deploying real-time dashboards and automated alerts that reduced **incident response time by 40%** and enhanced **production stability**.
- **Collaborated with cross-functional teams** to troubleshoot production issues, enhance feature rollouts, and streamline **CI/CD pipelines** using tools like **Git, JIRA**, and internal deployment frameworks, resulting in faster delivery and reduced deployment errors.

SKILLS

Languages	Python,C, C++, C#, Java, JavaScript, SQL, R,ReactJS
Backend	Spring Boot, REST APIs, Microservices, Node.js
Databases	MySQL, PostgreSQL, MongoDB, Cassandra
AI & Machine Learning	TensorFlow, PyTorch, Keras, Scikit-learn, Pandas
Cloud & DevOps	AWS (EC2, S3), Docker, Apache Kafka, Git, JIRA, CI/CD
Tools and Platforms	Git, Linux, Oracle APEX, JIRA, Agile Methodologies,Tableau

TECHNICAL PROJECTS

E-Commerce Fraud Detection System

Jan 2025 – Present

- To solve the challenge of processing high-volume orders while preventing real-time fraud, I architected a full-stack, event-driven microservices application. Using **Spring Boot**, **Apache Kafka**, and a polyglot persistence strategy with **PostgreSQL** and **Cassandra**, I developed a decoupled system for ordering, payment, and inventory. This solution successfully processes orders asynchronously while a dedicated fraud service analyzes transactions, automatically flags suspicious activity, and places orders on hold, enhancing both system resilience and security.

Swimming Pool Management System (DBMS)

Aug 2024 – Dec 2024

- To solve the inefficiency of a paper-based system causing scheduling conflicts, I architected a full-stack management application. Using **Oracle APEX** and **SQL**, I designed a comprehensive relational database and developed a user-friendly web interface. This solution successfully centralized all operational data, eliminated booking errors, and streamlined the facility's entire workflow.

Age of Information in Networks

Jul 2021 – Jul 2022

- To address data staleness in real-time IoT systems, I investigated the "Age of Information" (AoI) metric to ensure data freshness. I developed a **Python-based simulation** to model various network access methods, identifying optimal transmission strategies. This research led to a theoretical **15% reduction in data latency** and a **10% improvement in network efficiency**.

Satellite Image Classification Using Deep Learning

May 2021 – Aug 2021

- To address the slow and error-prone manual process of land use analysis, I engineered a deep learning pipeline to automate classification of satellite imagery. I designed and trained a Unet++ semantic segmentation model using **TensorFlow** and **Keras**, implementing robust image preprocessing and data augmentation techniques. The resulting system delivered a **92% classification accuracy**, providing a scalable tool for automated environmental monitoring.

CERTIFICATIONS

- **Completed JPMorgan Chase Software Engineering** Virtual Experience Program - gained hands-on exposure to interface debugging, feature implementation, and financial data visualization.[Certificate](#)

EDUCATION

University at Buffalo, The State University of New York

Dec 2025

Master of Professional Studies in Data Science and Applications | GPA: 3.96/4.0

Buffalo, NY

Relevant Courses: Machine Learning, Database Management System, Data Mining

Indian Institute of Technology Tirupati (IITTP)

Jul 2022

Bachelor of Technology in Electrical Engineering

Tirupati, India

Relevant Courses: Data Structures, Machine Learning for Image Processing, AI, Deep Learning, Signals and Systems

POSITIONS OF RESPONSIBILITY

Internship and Placement Representative, IIT Tirupati

.Jul 2020 – .Jul 2022

- **Coordinated and streamlined campus placement and internship drives** by liaising with companies and academic departments, resulting in a **20% increase in placement success** and a **30% rise in student engagement and participation**.