

# NAGA SATYA DHEERAJ

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## EXPERIENCE

### Joyride Games | Software Engineer

Oct 2022 - Jan 2023

- Integrated a UPI payment system into the gaming backend for 500K+ users by designing a secure, concurrency safe transaction flow with validations and balance checks, enabling seamless and reliable in-game purchases.
- Built and enhanced RESTful APIs to manage 5.8M+ game session records by refactoring endpoints and streamlining data access, improving scalability and backend maintainability.
- Accelerated backend database access for 5.8M+ game sessions using advanced indexing and SQL tuning, improving read/write latency by over 40%.
- Architected a session tracking and logging mechanism to ensure real-time visibility into gameplay events and transaction history, improving debuggability and audit readiness.

### Amazon | Software Engineer

Jul 2021 - Aug 2022

- Reduced invoice query latency by 65% while handling 5M+ records by redesigning the search pipeline using distributed microservices and optimized indexing strategies.
- Improved invoice validation across 120+ endpoints using batch processing and stream integration, saving 4 hours daily and boosting compliance by 30%.
- Achieved 5x system throughput by refactoring a monolithic backend into asynchronous, event-driven services with low-latency reactive streams and in-memory caching.
- Enabled safe daily deployments by adding feature flags and canary releases to CI/CD pipelines, reducing rollback risk and keeping failure under 1%.
- Established standardized observability practices using Prometheus and Grafana, equipping 10+ teams with actionable metrics to optimize application performance and improve overall system observability.

### Agrii Prince | Machine Learning Engineer

Apr 2020 - Jul 2020

- Built an end-to-end chatbot for Agrii Prince on Android and web platforms using RASA and Dialogflow, supporting two native languages with deep NLP for localized and intelligent user interactions.
- Engineered a Streamlit-based dashboard to visualize model metrics, detect data and concept drift, and monitor ML pipeline health, accelerating root cause analysis and improving model reliability.
- Trained and deployed classification models using spaCy and TensorFlow to extract user intents with 89% precision.

## SKILLS

- **Languages:** Java, Python, C++, JavaScript
- **Frameworks:** Spring Boot, Spring MVC, Hibernate, Django, Flask
- **Cloud & DevOps:** AWS (EC2, RDS, S3, Lambda, Route 53), Docker, Kubernetes, GitHub Actions
- **Databases:** PostgreSQL, MySQL, MongoDB, Firebase, SingleStore
- **Architecture:** RESTful APIs, Microservices, OAuth 2.0, OpenAPI (Swagger), CI/CD, System Design
- **Frontend:** React.js, Tailwind, CSS
- **Tools & OS:** Git, Linux, macOS, Windows

## PERSONAL PROJECTS & SYSTEMS WORK

### PulseTrack - Uptime & Log Monitoring Platform

[GitHub](#)

- Built a full-stack real-time monitoring system with uptime checks, public status pages, and environment-driven configuration.
- Implemented retry workflows, Slack and email notifications for failure alerts, and WebSocket-based live status updates.
- Designed detailed analytics dashboard and CSV export features to visualize uptime trends, response latency and HTTP status.

### To-Do App (Full-Stack Web Application)

[GitHub](#)

- Developed a full-stack task manager using Java, Spring Boot, MySQL and React with modular design and MVC architecture.
- Designed JWT-authenticated REST APIs for secure login, session control, and role-based authorization.
- Implemented CRUD flows for tasks and projects with centralized error handling and configurable service components.

### TwitterVault (Tweet Analysis Application)

[GitHub](#)

- Developed an NLP pipeline with FastAPI for tweet classification using Twitter API and web scraping.
- Integrated dual database storage with MongoDB and MySQL for structured and unstructured data.
- Optimized ingestion and batch processing to handle 10M+ tweets daily in near real-time.

## EDUCATION

### Rutgers, The State University of New Jersey

New Brunswick, NJ, USA

Master of Science in Statistics

Aug 2023 - May 2025

### Indian Institute of Technology, Kharagpur

Kharagpur, WB, India

Dual Degree (B-Tech+M-Tech), Engineering

Jul 2016 - May 2021