

# Hari Krishna Nuvvula

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## Education

<b>V.R. Siddhartha Engineering College</b> B.Tech in Computer Science   8.05 CGPA	2021
<b>Aditya Engineering College</b> Diploma in Computer Science   8.0 CGPA	2018

## Technical Skills

**Programming Languages:** Java, Typescript, SQL.

**Frameworks/Libraries:** SpringBoot, Hibernate, JPA, Kafka, JUnit, Mockito, React, Redux, Tailwind CSS, gRPC, REST API, MySQL, Mongo DB. Familiar with Flutter, Node.js, Express.js, Sequelize, Socket.IO, Neo4j.

**Software/Tools:** Git, Jenkins, Postman, Swagger, Maven

**Other Skills:** Microservices, High-Level Design, Low-Level Design, Schematic Design, API Design.

## Experience

**Systems Engineer**, Tata Consultancy Services – Hyderabad, Telangana Aug 2021 – Present

- Worked as a Java backend developer for American Express in the Redemptions domain, maintaining and enhancing applications for membership point redemptions.
- Improved application efficiency by leveraging caching mechanisms to minimize token service calls by 98%, improving response times for upstream service interactions.
- Developed an order reprocessing script to fulfill pending Gift Cards, widely adopted by the team, reducing potential Operational Risk Events by 40%.
- Optimized the overall performance of a redemption application by 8% leveraging HTTP connection pooling, significantly improving throughput and reducing response times.

## Projects

**E-Commerce Application** (Backend) E-Commerce (GitHub)

- Designed and developed a scalable e-commerce platform using microservices architecture
- Designed a multi-variant product schema in MongoDB, and enabled tracking of product availability and low stock updates in the inventory service.
- Optimized order processing by integrating real-time communication via gRPC and asynchronous updates through Kafka, reducing inter-service latency by 47%, while ensuring reliable payment processing with robust retry mechanisms for fault tolerance.
- Integrated ELK stack for centralized logging and real-time troubleshooting.
- **Tech Stack:** Spring Boot, Microservices, Kafka, gRPC, REST API, MySQL, MongoDB, ELK Stack.

**Bus Booking Application** (Frontend & Backend) Town Chale (GitHub)

- Designed and developed a highly scalable bus booking system, ensuring optimized seat utilization, handling concurrency, and solving complex real-time booking challenges to ensure a seamless user experience.
- Implemented dynamic seat allocation with optimized seat utilization, overcoming concurrency challenges by enabling efficient concurrent bookings for the same seat across different stops without locking entire seats.
- Implemented a secure authentication system with access and refresh tokens, featuring a token refresh mechanism based on usage patterns and time thresholds, alongside a rate-limiting mechanism based on device fingerprint and IP address to ensure seamless user sessions and optimal performance.
- Enabled vendors to efficiently manage their fleets by providing tools to create buses, design and customize seat layouts, define routes, and schedule journeys on the buses, streamlining the entire process for better operational control and flexibility.
- **Tech Stack:** Spring Boot, Typescript, React, Redux, JWT, REST API, Tailwind CSS, MySQL.