Jils Patel

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Experience

Founding Developer Intern Nov 2025 – Jan 2025
Trackaroo *Remote*

- Redesigned the role-based access control (RBAC) system with fine-grained, permission-based authorization.
- Implemented and optimized complex SQL queries for booking management, payment reconciliation, and hierarchical reporting.
- Improved backend performance by leveraging JPA Entity Graphs and query optimization techniques in Spring Boot.
- Designed secure and scalable REST APIs supporting multiple user roles and reporting workflows.
- Collaborated with frontend systems to ensure consistent authorization logic and data contracts across services.

Backend / Full Stack Developer Intern 2025
TrackPrep *Remote*

- Implemented Firebase Cloud Messaging (FCM) to deliver real-time notifications for assessments, schedules, and updates.
- Designed and scheduled cron-based background jobs for automated workflows such as reminders and report generation.
- Built backend services to support assessment scheduling, progress tracking, and role-based access control.
- Integrated authentication and authorization flows between backend services and client applications.
- Worked on API reliability, background task execution, and backend-driven feature orchestration.

Projects

Axelon – Fleet Management System *2025*

Tech Stack: Spring Boot, PostgreSQL, JWT, REST APIs, Spring Security, Swagger

- Built a production-grade Spring Boot REST API to manage fleet vehicles, drivers, trips, maintenance, and documents.
- Implemented JWT-based authentication with role-based access control for Admin, Fleet Manager, and Driver roles.
- Designed relational data models and optimized complex queries.
- Implemented core business logic including automated trip lifecycle handling and backend-driven analytics.
- Added production features such as caching, rate limiting, pagination, file uploads, and Swagger-based API documentation.

Prompt Chain – AI Workflow Automation Platform *2025*

Tech Stack: Node.js, TypeScript, Prisma ORM, Redis, JWT, REST APIs, Render

- Built a backend system for chaining multiple AI steps into structured, executable automation workflows.
- Implemented JWT-based authentication and role-aware authorization for secure workflow execution.
- Designed and developed REST APIs using Node.js with Prisma ORM for relational data modeling.
- Integrated Redis for caching, workflow state management, and execution metadata tracking.
- Deployed backend services on Render with environment-based configuration and reliability considerations.

Sculpt AI – Animation Generation Platform *2025*

Tech Stack: Node.js, Python, Manim, Animation Pipelines, REST APIs

- Built the backend orchestration layer for converting structured scene descriptions into animated outputs.
- Designed a scene-based generation pipeline that breaks prompts into executable animation steps.
- Implemented services to manage scene definitions, generation state, and execution sequencing.
- Handled long-running animation rendering tasks and coordinated pipeline execution reliably.
- Integrated backend generation workflows with a web-based frontend for triggering and monitoring jobs.

Technical Skills

Languages: Java, JavaScript (ES6+), Python
Frameworks: Spring Boot, Node.js, Next.js
Backend & APIs: RESTful API Design, JWT Authentication, Role-Based Access Control
Databases: PostgreSQL, MySQL, Redis, MongoDB
System Design: Microservices Architecture, Caching Strategies, High Availability, Kafka
Tools & Build: Git, GitHub, Postman, Swagger/OpenAPI, Render

Education

Birla Institute of Technology and Science, Pilani 2024 – 2027
Bachelor of Science (B.Sc) in Computer Science *Pilani, India*

- GPA: 9.11
- Relevant Coursework: Data Structures and Algorithms, Web Development, Computer Systems