Anshpreet Singh

[GitHub](#) | [LinkedIn](#) | [Email](#)

SUMMARY

Backend engineer with experience building and operating production systems using Java and Spring Boot. Focused on backend reliability, concurrency control, idempotent workflows, and database-driven system design.

EDUCATION

July 2024 – May 2028	**PCTE Institute Of Engineering and Technology, Punjab**
	B.Tech. in Computer Science Engineering (Current)

WORK EXPERIENCE

Backend Engineer (Internship), Scraplabs – Remote   Aug 2025 – Present

- Automated the backend scheduling lifecycle for **50+ weekly live sessions**, eliminating manual Zoom link generation and conflict checks
- Led PayPal integration with **idempotency keys**, preventing double-charging during webhook retries and network failures
- Optimized slot-locking queries using Flyway migrations to add missing indexes, **resolving production timeouts** during peak booking windows
- Hardened webhook security by validating signatures to prevent unauthorized access to the automation pipeline

Backend Consultant (Freelance), FeedBeep – Remote   Jul 2025 – Aug 2025

- Architected an AI-powered news ingestion pipeline using NewsData.io, Google Gemini, and Supabase
- Implemented rate limiting, monitoring, duplicate detection, and automated quality checks

Backend Engineer (Freelance), Compare.AI – Remote   Jun 2025 – Jul 2025

- Built production REST APIs using Spring Boot and PostgreSQL for an AI tool discovery platform with role-based admin workflows

PROJECTS

EventRelay – Reliable Webhook Processing Platform | [Github Repo](#)

- Designed asynchronous event processing using a database-backed state machine (RECEIVED, PROCESSING, FAILED)
- Enforced **exactly-once processing** guarantees using PostgreSQL `FOR UPDATE SKIP LOCKED`, preventing race conditions under concurrent load
- Implemented a custom background worker with exponential backoff and configurable retry limits for reliable delivery
- Built integration tests using **Testcontainers** to validate retry logic and dead-letter queues against a real PostgreSQL instance

ChatVault – One-to-One Messaging Platform | [Github Repo](#)

- Engineered a real-time messaging backend supporting **100+ concurrent WebSocket connections** using Spring Boot
- Leveraged **Java 21 Virtual Threads** to handle high-concurrency I/O tasks with minimal memory footprint compared to platform threads
- Secured API endpoints using Keycloak (OAuth2) and implemented stateless authentication

SKILLS

Languages	Java, SQL
Backend & Frameworks	Spring Boot, Spring Security, Spring Data JPA, REST APIs
Databases	PostgreSQL, MySQL
Concurrency & Systems	Asynchronous Processing, Database Transactions, Virtual Threads
Authentication & Security	Keycloak, OAuth 2.0, Role-Based Access Control (RBAC)
DevOps & Infrastructure	Docker, AWS S3, CloudFront, Flyway
Testing	JUnit, Integration Testing, Testcontainers