

MANISH RATHAUR

Nainital, Uttarakhand, India

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Email

LinkedIn

Portfolio

Github

Skills

Backend Development: Java, Core Java, OOP, Spring Boot, RESTful APIs, Microservices Architecture, System Design, JDBC, Hibernate

Frontend Development: JavaScript, HTML, CSS, React, Responsive Design, UI/UX Implementation

Database & Storage: MySQL, PostgreSQL, H2, Database Design, Query Optimization

Tools & DevOps: Git, GitHub, Maven, Postman, IntelliJ IDEA, VS Code, Version Control, Code Review

Soft Skills: Analytical Thinking, Problem Solving, Debugging, Code Quality, Communication, Team Collaboration

Coursework: Data Structures, Algorithms, Operating Systems, Computer Networks, Artificial Intelligence, Machine Learning

Projects

Carbon Pulse – Digital Carbon Footprint Tracker

[Live Demo](#)

- Architected scalable microservices platform tracking real-time digital carbon emissions using Spring Boot, Node.js, and React, processing 300+ messages/minute with 99% uptime SLA and production-grade reliability.
- Implemented system design patterns including circuit breaker and retry mechanisms achieving 95% fault resilience, with industry-standard `@tgwf/co2` library for IEA-compliant carbon calculations.
- Built real-time data visualization dashboard with 10-second polling intervals, Recharts integration, and H2 persistence layer ensuring continuous emission tracking with zero data loss.
- Designed REST API architecture with proper endpoint structure and database optimization strategies, implementing efficient query patterns for high-volume data processing.

Tech Stack: Spring Boot, Java, Node.js, React, REST APIs, Discord.js, `@tgwf/co2`, H2, Recharts, Tailwind CSS

Tab Story – AI-Powered Browser Tab Management Extension

[Live](#)

- Engineered full-stack Chrome extension with AI-powered intent detection using Chrome's Built-in AI API, automatically clustering and organizing browser tabs with 100% local data processing for privacy-first architecture.
- Implemented robust session management system with crash recovery, auto-backup, and timeline restoration features, processing tab metadata in real-time achieving zero data loss across browser sessions.
- Designed intelligent tab grouping algorithm with domain-based fallback logic, integrating Chrome Tabs and Side Panel APIs for seamless UX and productivity workflows, supporting unlimited tab organization.

Tech Stack: JavaScript, Chrome Extension Manifest V3, Chrome Built-in AI API, Chrome Storage/Tabs API, Material Symbols

Achievements

- Contributed 5+ Java-based UI/UX improvements to **Organic Maps** open-source project, enhancing code quality and user experience for thousands of active users worldwide.
- Led and organized 3+ academic hackathons and technical events, demonstrating leadership, project management, and teamwork while mentoring peers in software development best practices.
- Consistently practiced debugging methodologies, code review processes, and clean code principles, maintaining high code quality standards across personal and collaborative projects.

Education

Bachelor of Technology (Computer Science & Engineering)

Expected 2026

Graphic Era Hill University

CGPA: 7.83

Certifications

- Udemy – **100 Days of Code: Python Bootcamp** (Python fundamentals, data structure implementation, problem-solving).
- Udemy – **Optimizing Generative AI with LangChain and Hugging Face** (LLM pipelines, prompt chaining, model optimization, AI system design).