PRIYANSHU SHARMA

JAVA BACKEND • AI/ML • CLOUD
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EDUCATION

Pranveer Singh Institute of Technology (PSIT) | Kanpur *2024 - 2028*
B.Tech Computer Science & Engineering, expected graduation in 2028 **CGPA: 8**

Bal Vidya Bhawan Public School (CISCE) | Hardoi, India *2020 - 2022*
12th (Intermediate) **Percentage: 85.8%**

Bal Vidya Bhawan Public School (CISCE) | Hardoi *2019 - 2020*
10th (High School) **Percentage: 79%**

PROJECTS

Geospatial AI/ML Framework for Urban Heat Stress Mitigation *May 2026 - Present*
Lead Developer | Based on an ISRO Urban Heat Mitigation Problem Statement
- **Built** a multi-city geospatial AI pipeline across Delhi, Bengaluru, Lucknow, and Kanpur, processing 70,595 spatial observations for urban heat analysis.
- **Fused** 6 satellite, climate, and terrain sources including Landsat 8/9, Sentinel-2, ERA5-Land, ESA WorldCover, GHSL, and SRTM DEM.
- **Engineered** 24+ thermal and urban-morphology features using OSM/Overture data, including 1.55M Bengaluru building footprints and 500 m spatial buffers.
- **Trained** an XGBoost LST model achieving $R^2 = 0.8904$, MAE = 1.13°C, and RMSE = 1.50°C across a 70K+ sample multi-city dataset.
- **Performed** spatial block validation and SHAP explainability, achieving mean spatial $R^2 \approx 0.792$ while identifying built-up intensity and land use as key predictors.
- **Developed** hotspot mapping and counterfactual cooling scenarios to compare vegetation, built-up, and urban-form interventions through an interactive geospatial dashboard.

Technologies / Tools Used: *Python, XGBoost, SHAP, Google Earth Engine, GeoPandas, OSM, Overture Maps, Landsat 8/9, Sentinel-2, ERA5-Land, FastAPI, React, TypeScript*

Vidyut — Agentic EV Charging Platform • Startup | **Live Demo** *Jan 2026 - Present*
Founder & Backend/AI Developer
- **Developed** an AI-powered EV trip-planning agent using Gemini and Google ADK to recommend charging stops based on battery state, availability, travel time, pricing, and reserve constraints.
- **Designed** REST APIs and PostgreSQL models with layered architecture, DTO validation, JWT authentication, and role-based access across 4+ domains.
- **Developed** an AI trip-planning agent evaluating 6+ factors, including battery state, charger availability, travel time, pricing, and safety reserve.
- **Validated** the planner on a ~601 km route, generating a 6-stop charging plan at ~₹985 with automatic rerouting after charger failure.
- **Designed** an EV charging marketplace connecting drivers, charging companies, and property owners with a target 5–6% platform fee per transaction.

Technologies / Tools Used: *React, TypeScript, Java, Spring Boot, PostgreSQL, REST APIs, JWT, Maven, Gemini, Google ADK*

Text Pro Editor (by Coursera) | GitHub *Nov 2025 - Jan 2026*
Developer | Data Structures & Algorithms
- Engineered a React-based smart text editor focused on high-performance algorithms, state optimization, and efficient text processing.
- Optimized document parsing using memoization in AfficientDocument.java, achieving O(N) time complexity and a **1.8× speedup** on 10K+ character files.
- Built a custom MyLinkedList architecture with JUnit tests; benchmarking against HashSet showed a 99.9% lookup latency reduction (169.9 ms to 21.1 µs) at 80K words.
- Implemented a **Trie-based indexing system** for fast keyword retrieval and predictive word autocomplete.
- Developed an intelligent spell-checking engine to detect spelling errors and suggest real-time word corrections using dictionary-based matching.

Technologies / Tools Used: *Java, React, JUnit, Linked Lists, HashSet, Trie, Flesch Score.*

SKILLS

Programming Languages :	Python, Java, JavaScript, TypeScript, SQL, C
AI/ML :	LightGBM, XGBoost, scikit-learn, SHAP, Machine Learning, Feature Engineering, Model Evaluation, Gemini, Google ADK
Backend Development :	Spring Boot, REST APIs, JWT Authentication
Frontend Development :	HTML, CSS, React.js
Databases :	PostgreSQL, MySQL
Cloud & Deployment :	Google Cloud Run, Cloud SQL, Firebase, Docker
Developer Tools :	Git, GitHub, Maven, YAML, Linux, JUnit, IntelliJ IDEA, VS Code

CERTIFICATIONS & TRAINING

- Infosys Springboard — Python, HTML, CSS, and Data Science
- SQL(Basic) Certification — HackerRank
- Java (Basic) Certification — HackerRank
- Data Structures and Performance Using Java — University of California (Coursera)
- CSS(Basic) Certification — HackerRank
- JP Morgan Software Engineering Virtual Experience — Forage

CODING PLATFORMS

- **HackerRank**: 4★ C, 4★ Java, 3★ Python, 3★ C++, 4★ Problem Solving
- **LeetCode**: 350+ problems solved; around top 50% as of Sep 2026
- **Codeforces**: Actively participating in contests and practicing competitive programming

STRENGTHS

Analytical Thinking • Quick Learning • Adaptability • Team Collaboration

AWARDS & ACHIEVEMENTS

- National Finalist, Codecure-AI Biohackathon — SPIRIT'26, IIT (BHU), Varanasi
- Advanced to Round 2 — Tata Imagination Challenge 2026
- Rank 2,900 — Amazon ML Challenge 2026
- 27th Rank in College Hackathon

INTERESTS

Chess.com ratings: 1200 Rapid, 850 Blitz, 800 Bullet @unexpectedpriyanshu.