

Prateek Dangwal

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GitHub — LinkedIn

Education

Guru Gobind Singh Indraprastha University
Bachelor of Technology in Computer Science and Engineering

Aug 2024 – Present
CGPA: 9.401

Experience

EV Battery Pack Simulator Developer Intern 2026

- Worked on a Python-based EV battery pack simulation system for modeling and processing battery electrical and thermal behavior.
- Worked with battery parameters including **SOC, SOH, voltage, current, temperature, capacity, and cycle count**.
- Developed backend APIs using **FastAPI** for battery generation, retrieval, and data processing.
- Built an interactive monitoring interface using **Streamlit and Plotly** for displaying battery statistics and visualizations.
- Implemented battery data persistence using **SQLite and SQLAlchemy** for storing and retrieving battery information.

i-Telematics Solutions — Cyber Security Intern 2026

- Worked on cybersecurity concepts for aerospace-oriented software environments, including network security, authentication, threat analysis, and risk mitigation.
- Analyzed and documented technical information using structured validation and problem-solving approaches.

Projects

Battery Insight — Full-Stack Battery Health Platform Live Demo GitHub

- Built a full-stack battery health monitoring platform using **React, Spring Boot, REST APIs, JPA, SQLite, and Tailwind CSS**.
- Developed REST APIs for battery telemetry, battery management, dashboard statistics, and battery health analysis.
- Implemented a rule-based battery health analyzer using **SOC, SOH, voltage, current, temperature, capacity, and cycle count**.
- Integrated the React frontend with Spring Boot APIs using **Axios**, including CORS configuration and API error handling.
- Deployed the frontend on **Vercel** and the Spring Boot backend on **Render**.

Banking Management System

- Developed a Java-based banking management system using **Object-Oriented Programming** principles including encapsulation, inheritance, abstraction, and polymorphism.
- Implemented core banking operations such as account creation, deposits, withdrawals, balance management, and transaction handling.
- Designed modular classes to separate customer, account, and transaction-related responsibilities.

Spotify Clone

- Developed a responsive music streaming interface using **HTML, CSS, JavaScript, and React**.
- Implemented reusable components and interactive UI elements for navigation, playlists, and music controls.

Technical Skills

Languages: Java, Python, C++, JavaScript, SQL

Backend & APIs: Spring Boot, FastAPI, REST APIs, JPA

Frontend: React.js, HTML, CSS, Tailwind CSS, Streamlit

Python Technologies: SQLAlchemy, Plotly

Databases: MySQL, SQLite

Core CS: Data Structures & Algorithms, OOP, DBMS, Operating Systems, Computer Networks

Tools: Git, GitHub, VS Code, IntelliJ IDEA

Achievements

- Solved **520+** **Data Structures and Algorithms** problems on **LeetCode**.
- Participated in **20+** **LeetCode** coding contests.
- Maintained a strong academic record with a **9.401 CGPA**.
- Completed industry internships in **EV battery simulation** and **cybersecurity**.