# ABHISHEK SINGH

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## Education

**Rajkiya (Government) Engineering College, Bijnor** *Nov 2021 – Jun 2025*
*B.Tech in Information Technology — Dr. A.P.J. Abdul Kalam Technical University, Lucknow* *C.G.P.A: 7.0/10*

## Skills summary

**Languages:** Java, Python, C++, SQL
**Frameworks/Tools:** Spring Boot, FastAPI, Git, Flutter, JPA/Hibernate, Linux, IntelliJ IDEA, SQL Workbench
**Machine Learning:** Scikit-learn, NumPy, Pandas, Data Visualization, Model Deployment
**Technical Skills:** Data Structures & Algorithms, REST API Design, Debugging, Problem Solving

## Experience

**Java Backend Intern - PolicyBazaar.Com** July 2025 - November 2025
*On-site Gurugram*

- **Developed** a Spring Boot microservice powering healthcare consultations, enabling **10K+ online/offline bookings** with patient profiling and integrated payment tracking, improving booking reliability by **20%**.
- **Designed and developed 6 secure RESTful APIs** with **JWT-based authentication**, **JPA persistence**, and **Kafka streaming** for structured logs — ensuring **data integrity, scalability, and seamless partner system integration**.
- **Optimized backend performance** by implementing **validation frameworks**, **Redis in-memory caching**, and **timezone-aware utilities**, reducing **API response time by 30%**.
- **Engineered** health data APIs for **AiSHA**, enabling **real-time health metric visualization** and secure **MySQL** data storage with JWT-based authentication.
- **Created** highly scalable and secure APIs serving **15K+ users** across Android and iOS **(DocPrime App)**, hardening backend against **SQL injection** and **DDoS attacks**.

## Projects

**AiSHA - Your Personal Health Assistant (Live in DocPrime App by PolicyBazaar)** **View Project**

**Architected** and **deployed** a production-grade **FastAPI microservice** using **rPPG technology** for real-time biometric signal analysis, predicting **8+ health metrics** including SpO, HRV, and Blood Pressure. **Integrated AWS EC2**, **Kafka**, and **RESTful APIs** to enable scalable, secure, and asynchronous data streaming for 15K+ mobile app users. **Developed** ML-based inference pipeline using **Scikit-learn and NumPy**, achieving **95% accuracy** in health metric predictions on test datasets. **Implemented** robust **JWT authentication**, error handling, and structured logging, reducing API downtime and improving data reliability by **25%**.

**Machine-Learning-Prediction-App** **View Project**

**Developed** an interactive web application using **Streamlit**, enabling users to upload **CSV files** and generate **real-time predictions** with a pre-trained **machine learning model**. **Implemented** dynamic data visualization using **Matplotlib** and **Seaborn**, including **pie** and **bar charts** to display prediction distributions for both categorical and continuous data. **Engineered** an end-to-end **ML pipeline** featuring **model serialization (Joblib)**, **data preprocessing**, and **downloadable output generation**, making ML insights accessible to non-technical users.

## Certification

**Machine Learning Data Science Program**, Greeks for Greeks April 2024 - September 2024
Relevant Coursework: Understanding of Machine Learning Algorithms, Data Preprocessing and Feature Engineering, Deep Learning, Data Visualization,, Deployment of Machine Learning Models. **View Certificate**