

Yash Kumar

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Education

Jaypee University of Engineering and Technology

Bachelor of Technology in Computer Science (Expected May 2028)

2024 – Present

CGPA: 9.16

- Relevant Coursework: Data Structures and Algorithms, Object Oriented Programming, DBMS, Machine Learning

Projects

Q Samriddhi: Credit Scoring Automation | Python, XGBoost, FastAPI, Streamlit, SHAP

October 2025

- Engineered an end-to-end ML credit scoring system using **XGBoost** to predict loan default probability, leveraging historical credit and repayment data for high-accuracy risk assessment.
- Processed a **261,746-household dataset** (NSSO HCES 2022–23) to engineer features and train regression models for Monthly Per Capita Expenditure (MPCE) estimation.
- Designed a composite risk scoring algorithm using a **60:40 weighted formula** (Repayment vs. Income) to classify beneficiaries into distinct risk tiers.
- Deployed production-ready REST APIs via **FastAPI** and a **Streamlit** dashboard integrated with SHAP values to provide explainable AI insights for real-time decisioning.

Q Manova: Mental Health Platform for Students | React, TypeScript, Firebase, Groq LLM

September 2025

- Architected a full-stack, multi-tenant mental health platform with isolated student and admin dashboards designed for institution-level deployment.
- Designed and implemented a structured Firebase Firestore data model with collections for colleges, students, counselors, appointments, forum posts, resources, and mental health assessments.
- Enforced secure **Role-Based Access Control (RBAC)** using Firebase Authentication and Firestore security rules to strictly separate student-level and admin-level access.
- Integrated an **AI-powered chatbot using Groq LLM API** with conversation rating, issue tagging, and anonymized aggregation to surface campus-wide mental health trends.
- Implemented end-to-end workflows for counselor discovery, appointment booking (video/in-person), anonymous forum posting, reporting, and admin moderation.
- Built analytics dashboards visualizing usage metrics, forum activity, appointment trends, and aggregated WHO-5 / PHQ-9 / GAD-7 scores by department and academic year while preserving student anonymity.

Q Health Vision | HTML, CSS, JavaScript, Gemini APIs, Twilio

April 2025

- Developed an AI healthcare assistant for symptom analysis and report summarization using **Gemini APIs** and OCR technologies (Tesseract.js).
- Automated patient engagement via **Twilio** (Voice/SMS) and EmailJS for appointment and medication reminders.
- Built a location-based hospital discovery tool using the Geolocation API and Leaflet.js.

Technical Skills

Languages: Python, C++, Java, C, JavaScript, HTML/CSS

Machine Learning: XGBoost, Scikit-learn, Pandas, NumPy, Feature Engineering, SHAP, Model Evaluation

Backend / APIs: FastAPI, Firebase Authentication, REST APIs

Databases: MySQL, Firebase Firestore

Frontend: React, TypeScript, Streamlit

Developer Tools: Git, GitHub, VS Code, IntelliJ IDEA

Honors & Awards

Winner, HACTRON2025 Hackathon: Secured 1st place as Team Leader.

Best Performer (DSA/CP): Recognized by Code Conquerors for problem-solving skills in Data Structures and Algorithms.

Leadership Experience

Code Conquerors

April 2025 – Present

Coordinator

Jaypee University of Engineering and Technology

- Led the planning and execution of monthly coding contests, engaging **50+ students** across multiple academic years.
- Mentored junior members in **Java, C++, and Python**, improving participation and performance in competitive programming contests and hackathons.