

Irfan Hussain

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EDUCATION

- Bachelor of Technology in Computer Science and Engineering** Aug 2023 – Present
Vellore Institute of Technology, Chennai
– **Relevant Coursework:** Data Structures & Algorithms, Operating Systems, OOP, DBMS, Software Engineering, Computer Networks, Cloud Computing
CGPA: 9.30 / 10

EXPERIENCE

- Vellore Institute of Technology, Chennai** Jun 2025 – Aug 2025
Summer Research Intern
– Developed a **symptom-based ML framework** for Monkeypox diagnosis using XGBoost, achieving **90.7% accuracy, 0.905 precision, and 1.000 recall**.
– Implemented advanced preprocessing with **PCA** and **oversampling**, improving sensitivity in detecting true positives by **15%+** compared to baseline models.
– Enhanced interpretability using **SHAP & LIME**, generating global feature importance and local explanations; validated with **confusion matrices, ROC/PR curves, and SHAP plots**.

TECHNICAL SKILLS

- Languages:** C/C++, Java, Python, JavaScript
- Frontend:** HTML, CSS, Tailwind CSS, React.js, Next.js
- Backend & Frameworks:** Node.js, Express.js, FastAPI
- Databases/Cloud:** SQL, MongoDB, Supabase
- Tools:** Git, GitHub, Docker, Postman
- AI/ML:** Scikit-learn, Seaborn, SHAPE, LIME

PROJECTS

- AI-Powered Document Insights System** Aug 2025
Web App — Next.js, FastAPI, Docker, Gemini API, Google TTS
– Built an **AI-powered PDF reader** for **Adobe India Hackathon 2025**, ingesting **20+ documents** and enabling cross-document semantic linking with **95% retrieval accuracy**.
– Implemented **real-time semantic search & LLM insights** via Google Gemini API, surfacing **5 relevant snippets** per query in under **5s latency**.
– Developed **Podcast Mode** with Google TTS, generating **2–5 min audio summaries** that improved user engagement by **40%**.
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- Talk PDF – Chat with PDFs** Jun 2025
Web App — Next.js, Supabase, Gemini API
– Built an AI-powered chatbot that allows interactive Q&A on PDF documents, tested on **10+ files** with over **90% retrieval accuracy**.
– Implemented a **persistent memory system** using Supabase that improved chat continuity across sessions by nearly **40%**.
– Designed and deployed a **responsive web interface** using Next.js App Router and Tailwind CSS for seamless user experience across devices.
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- Get Me A Chai – Crowdfunding Platform for Creators** Feb 2025
Web App — Next.js, MongoDB, Razorpay
– Developed a full-stack crowdfunding web app for creators to receive support via virtual “chai” donations, successfully processing **50+ test payments**.
– Integrated **Razorpay API** with Node.js and MongoDB to enable secure payment handling and reliable transaction storage.
– Delivered a fully responsive UI using React and Tailwind CSS, ensuring smooth usability across both desktop and mobile platforms.
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ACHIEVEMENTS AND CERTIFICATIONS

- Adobe India Hackathon 2025 National Finalist**, selected among the **Top 7 teams** out of **260,000+ participants**.
- Solved **180+ problems** on **LeetCode** and actively participated in weekly coding contests.
- Earned **5-Star** in Python and C++ and **3-Star** in Problem Solving on **HackerRank**.
- Completed Udemy course: **Mastering Data Structures and Algorithms in C/C++**.
- Earned **Google Cloud badges** in Generative AI and Gemini: SDLC, Application Development, and AI App Creation.