

ANSHUM SINGLA

Mansa, Punjab

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Education

Thapar Institute of Engineering and Technology

B.E. Computer Engineering, CGPA 8.14/10

Aug, 2023 - May, 2027

Patiala, Punjab

Skills

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

AI/ML: Machine Learning, Deep Learning, Reinforcement Learning, NLP, RAG, LLMs, Transformers, Embeddings, Speech Processing, Speech Recognition & Analysis

Frameworks: React, React Native, Flutter, FastAPI, Node.js, Spring Boot, Tailwind CSS

Databases: PostgreSQL, MongoDB, Supabase, Firebase

Cloud & Tools: AWS (EC2, Bedrock), Git, GitHub, CI/CD

Coursework: Data Structures & Algorithms, Object-Oriented Programming, Database Management Systems, Operating Systems, Computer Networks, Machine Learning

Experience

Center of Excellence in Data Science and AI, TIET Patiala

Jun, 2025

Software Development Intern — App & Web Development

Patiala, Punjab

- Engineered a full-stack mental health chatbot using Flutter, React, and Node.js supporting 50+ test users.
- Enhanced user engagement by designing a gamified space-themed UI with mood tracking and mini-games (+20% retention).
- Contributed across Agile sprints, delivering 10+ features through collaborative planning and peer reviews.

Postgraduate Institute of Medical Education and Research (PGIMER)

Jan, 2025

Lead Full-Stack Developer

Patiala, Punjab

- Sole technical lead on a PGIMER-TIET institutional alliance project, independently architecting and delivering a production diabetes management app in React Native, Strapi (Node.js), AWS and PostgreSQL for real clinical users.
- Delivered a production-grade RAG medical chatbot using AWS Bedrock, vector retrieval, embeddings, and LLM inference, reducing manual query resolution by 40% for clinical staff.
- Automated reminders and engineered secure REST APIs, reducing missed data entries by 25% and improving interoperability by 30%.

Projects

KONTA - Context-Aware Browsing Extension | React, Plasmio, Transformers.js, Tailwind CSS

Jan, 2026

- Architected a Chrome extension that automatically organized browsing activity into project-based knowledge spaces, reducing manual resource tracking for users.
- Engineered a hybrid retrieval pipeline leveraging keyword search, semantic embeddings, vector search, and transformer-based ranking to improve discovery of previously visited resources.
- Implemented Louvain community detection to cluster 500+ webpages into project-centric knowledge graphs, enabling visual exploration of relationships across 1,000+ connections.

Cross-Platform Music Streaming App | Flutter, FastAPI

Oct, 2025

- Architected a Flutter-based music streaming app with real-time playback, playlists, and JWT authentication.
- Integrated a FastAPI backend with PostgreSQL and Cloudinary to support 100+ media assets.
- Optimized background playback and caching, lowering playback latency by 20%.

Smart Reminder Platform | Full-Stack (React, FastAPI)

Dec, 2025

- Built a full-stack reminder platform integrating Gmail and Google Calendar APIs for automated deadline extraction.
- Orchestrated an LLM-powered information extraction pipeline that processed 50 emails in under 7 seconds, automatically extracting deadlines and synchronizing events to Google Calendar.
- Implemented OAuth authentication and secure token flows, reducing authorization failures by 25%.

Leadership & Achievements

SAMSUNG Prism Web Agent Hackathon

Winner

Mar, 2026

Patiala, India

OWASP

Joint Secretary

Aug, 2025

International