

ANSHUM SINGLA

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Education

Thapar Institute of Engineering and Technology

Aug 2023 - Jun 2027

B.E. Computer Engineering, CGPA 8.00/10

Patiala, Punjab

Experience

Postgraduate Institute of Medical Education and Research (PGIMER)

Jan 2026 – Jul 2026

Lead Software Engineer

Patiala, Punjab

- **Directed** technical architecture on an institutional alliance project, independently building a diabetes management app (React Native, Strapi, AWS, PostgreSQL) supporting 15+ clinical users and securely managing 100+ patient data points.
- **Deployed** a production-grade RAG medical chatbot utilizing AWS Bedrock, vector retrieval, and custom LLM inference to accelerate diagnostic query lookups.
- **Automated** 5+ daily clinical reminder workflows and engineered secure REST APIs, reducing missed data entries by 25%.

Center of Excellence in Data Science and AI, TIET Patiala

Jun 2025 – Dec 2025

Software Development Intern | App & Web Development

Patiala, Punjab

- **Developed** an end-to-end mental health chatbot supporting 50+ active test users with a 99% uptime.
- **Designed** a space-themed UI featuring integrated mood tracking and interactive mini-games, improving daily login by 35%.
- **Spearheaded** development across 4 iterative Agile sprints, actively delivering 10+ core features via collaborative planning.

Projects

Ossature | *Spring Boot, WebSockets, PostgreSQL, Python, LangGraph* | **GitHub**

Aug 2026

- **Architected** a 5-node LangGraph AI interview agent (Spring Boot, WebSockets) interviewer, generator-critic solution node, diagram-review node, and timed summarization/debrief nodes
- **Designed** a real-time voice interaction layer streaming STT/diagram state over WebSockets, with on-device STT/TTS eliminating per-session voice API cost entirely
- **Designed** a debrief pipeline generating 5 interim summaries across a 30-min session, consolidated into a final report benchmarked against an AI-generated reference solution

KONTA | *React, Plasmio, Transformers.js* | **GitHub**

Jan 2026

- **Architected** a scalable Chrome extension that systematically organized browsing activity into project-based knowledge spaces, saving users an estimated 90+ minutes per week by eliminating manual resource tracking.
- **Engineered** a hybrid retrieval pipeline leveraging keyword search, semantic embeddings, vector search, and transformer-based ranking achieving sub - 400ms query latency.
- **Integrated** the Louvain community detection algorithm to dynamically cluster 500+ webpages into knowledge graphs, enabling lag-free visual exploration of relationships across 1,000+ data connections.

Smart Reminder Platform | *React, FastAPI, Gemini API* | **Link**

Dec 2025

- **Created** a full-stack reminder platform integrating Gmail and Google Calendar APIs, successfully parsing and categorizing 95% of task-based email threads accurately.
- **Orchestrated** an optimized LLM-powered extraction pipeline that processed 50+ emails in under 5 seconds, yielding a 98% extraction accuracy for actionable calendar events.
- **Established** robust OAuth 2.0 authentication and secure token management flows with automated parsing triggers.

Technical Skills

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

AI/ML: Machine Learning, Gen-AI, Agentic AI, RAG, NLP, Reinforcement Learning, Speech Processing

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

Databases: PostgreSQL, MongoDB, Supabase, Firebase

Cloud & Tools: AWS (EC2, S3, Bedrock), Git, GitHub, CI/CD, Google Cloud Platform, Docker, REST APIs, System Design

Coursework: Data Structures & Algorithms, OOPs, Database Management Systems, OS

Leadership & Achievements

Kestra Hacktober

Oct 2026

Open Source Contributor (3 PRs merged)

Remote

OWASP

Aug 2025 – Aug 2026

Joint Secretary

Thapar, Patiala

SAMSUNG Prism Web Agent Hackathon

Mar 2026

Winner

India