

ANSH SOMRA

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PROFESSIONAL SUMMARY

Full-Stack AI Engineer focused on system design, algorithmic problem-solving, and LeetCode, with hands-on experience in C++, Python, SQL, and open-source contributions. Strong foundation in backend engineering and computer science, seeking an AI/Backend Engineering internship to work with low-level systems and large-scale models.

EDUCATION

CHRIST (Deemed to be University) Bachelor of Computer Applications (Hons/Hons with Research) CGPA: 8.3/10	Bangalore Yeshwanthpur Campus May 2028
Maheshwari Public School Class XII Percentage: 82%	Ajmer, Rajasthan May 2024
St. Anselm's Sr. Sec. School Class X Percentage: 70%	Ajmer, Rajasthan Apr 2022

INTERNSHIP EXPERIENCE

VideoLan Open source contributor - Debugged and resolved issues in Lua scripts for VLC Media Player by removing the deprecated appletrailers.lua functionality. Contributed a merge request that was successfully merged by VideoLAN maintainers - Debugged and resolved issues in VLC Media Player's dailymotion.lua by migrating from HTML parsing to the JSON API for dailymotion.com	Remote Apr 2026
TECHIE WORLD - FCZ Data & Analytics Intern and AI Development - Built an AI chatbot using Langflow and ChatGPT APIs, providing automated property recommendations for Dubai real estate across 20+ properties. - Optimized the chatbot through text chunking and built an admin dashboard for active user monitoring.	Remote Apr 2026

PROJECTS

Customer Support Ticket Classification and Hotspot Analysis Python, NLP, BGE Embeddings, UMAP, HDBSCAN, Linear SVC, Scikit-learn, Folium Built an end-to-end NLP and machine learning pipeline to clean, cluster, classify, and geographically analyze customer support tickets. - Applied BGE embeddings, UMAP, and HDBSCAN for semantic issue discovery, followed by Linear SVC classification achieving 97.52% accuracy. - Built an interactive India hotspot map using Folium to visualize city-wise ticket concentrations and identify category-specific issue trends.	Jun 2026 - Jul 2026
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IoT-Based Smart Chatbot and Human Detection System | ESP32, Python, Arduino IDE, IoT Sensors, PySerial

Feb 2026 - Mar 2026

- **Developed** a presence-activated voice AI assistant using ESP32 with ultrasonic and PIR sensors for real-time human detection.
- Integrated Python, Faster-Whisper, Silero VAD, and Cohere API for speech recognition and intelligent conversational responses.

Custom Relational Database Engine in C++ | C++, B+ Tree Indexing, Recursive-Descent Parsing, Write-Ahead Logging

Aug 2026 - Sep 2026

- Designed and implemented a disk-based relational database engine from scratch, featuring a page-based storage layer with an LRU buffer pool and a B+ tree index for $O(\log n)$ lookups and range scans.
- Built a hand-written SQL parser and a Volcano-model query execution engine supporting SELECT/INSERT/UPDATE/DELETE with JOIN and WHERE clauses, backed by a write-ahead log for crash-safe durability.

Metanoia-UnoVerse | React, Google Apps Script, Axios, Claude Haiku , HTML, CSS, JSON

Jan 2026 – Jan 2026

- **Built** MetanoiaUnoverse, a flagship event website for Christ University, enabling intra-college participation
- Implemented registration workflows, dynamic forms, and API communication using Google Apps Script and a dynamic UI using React and Axios for seamless user interaction. Implemented libraries such as Howler.js, Three.js, and GSAP.

SKILLS

Programming Languages: C++ (Intermediate), Python (Intermediate), React (Intermediate), SQL (Intermediate), Java (Working Knowledge), JavaScript (Intermediate)

Web Development: HTML, CSS, React.js, Node.js, Express.js, Vite, Tailwind CSS

Databases and Backend: MongoDB (Intermediate), MySQL (Intermediate), PostgreSQL, SQLite

Core CS: Data Structures and Algorithms, Object-Oriented Programming, Database Management Systems, Computer Networks, Operating Systems

Technologies and Tools: Git & GitHub, AWS, Arduino IDE, ESP32, Docker, TensorFlow, Bash, RAG, Linux, PyTorch, REST APIs, SQL, GDB Debugging, Postman, LangChain

Domains: Full-Stack Web Development, Artificial Intelligence and Machine Learning, Natural Language Processing, IoT, Cloud Computing, Cybersecurity, Route Optimization and Graph Algorithms

Soft Skills: Leadership, Logical & Analytical Thinking, Problem Solving, Cross-functional Collaboration, Time Management

Languages: English - Fluent | Hindi - Fluent | German - Conversational

CERTIFICATIONS

- **AWS Academy Graduate: Cloud Foundations** - AWS Academy | Aug 2026
- **Summer School on Linear Algebra** - Department of Mathematics, CHRIST (Deemed to be University) | Apr 2026
- **PL/SQL** - Infosys Springboard | Feb 2026
- **Privacy and Security** - NPTEL | Oct 2025
- **DSA Skill Assessment** - Scaler | Mar 2025
- **The Frontend Developer Career Path** - Scrimba | Jan 2025

CO-CURRICULAR AND LEADERSHIP

Samagra - The Computer Science Association, CHRIST University

Technical Head

Jul 2025 - Jul 2026

Member

Jun 2024 - Jun 2025

Managed the technical team; guided club members in problem-solving, technical workflow, and execution of Department activities. Organized CR3PT, Capture the Flag (CTF) Cybersecurity competition for UG and PG students, with hands-on technical challenges involving 100+ participants, earning positive feedback from participants

ACHIEVEMENTS AND PUBLICATIONS

- 1st place, Technical Treasure Hunt Ramaiah College (Yuganter Fest), Bengaluru
- 2nd place, Code Relay Kristu Jayanti, Bengaluru
- 2nd place, CTRL+FIX Coding Competition SAMAGRA, Christ University, Bengaluru
- 3rd place, WWW Digital Catalyst by SDG Christ University, Bengaluru
- Extracurricular Scholarship - Top 5% of Batch - CHRIST University