# Anushka Saini

+91 6354288270 · anushka.saini@students.iiit.ac.in
GitHub · Personal Website

## Education

**B.Tech in Electronics and Communication Engineering** 2024–2028
International Institute of Information Technology, Hyderabad
**CGPA: 8.9 / 10**
*SGPA:* Sem 1 – 8.3, Sem 2 – 8.9, Sem 3 – 9.4
**Board Examinations:** Class X – 98.6% (CBSE), Class XII – 94.2% (CBSE, Computer Science)

## Experience

**Chubb** *June 2025 – July 2025*
*Software Engineering Intern*

- Worked on backend API integration for an internal enterprise chatbot used across teams.
- Developed an image-to-text extraction pipeline to enable chatbot interaction with scanned documents.
- Applied OCR-based techniques to convert unstructured image inputs into structured textual data.
- Collaborated with engineers across teams to integrate extracted content into downstream chatbot workflows.

## Projects

**Systems Programming Projects (C, Linux)** code

- Implemented a command-line shell in C with support for process creation, basic I/O redirection, and signal handling.
- Developed socket-based client–server applications to understand network communication and concurrent request handling.
- Modified scheduling behavior in the xv6 operating system to study the impact of different policies on process execution.

**Relational Database Applications** code

- Designed relational schemas in MySQL for structured datasets involving multiple entities and relationships.
- Implemented SQL queries to support aggregation, filtering, and reporting use-cases.
- Explored normalization trade-offs and their impact on query complexity and maintainability.

**Conversational AI Pipeline (Enterprise Chatbot)** code

- Built a stateful enterprise chatbot with persistent dialogue memory across user sessions.
- Integrated LLM-based sentiment analysis with rule-driven confidence scoring and escalation for low-confidence queries.

**Arduino-to-Arduino Bluetooth Safety System** code

- Designed a low-cost embedded system for real-time obstacle detection using ultrasonic sensing.
- Implemented wireless serial communication between two Arduino boards using HC-05 Bluetooth modules.
- Integrated threshold-based logic to trigger remote audible alerts for collision prevention.

## Technical Explorations

**Machine Learning (Exploratory)**

- Implemented supervised learning models including linear and logistic regression using NumPy and scikit-learn for prediction and classification tasks.
- Built and trained neural networks using TensorFlow for multi-class classification problems.
- Implemented core neural network components from scratch to understand backpropagation, loss functions, and training dynamics.
- Applied model evaluation and generalization techniques to analyze performance across different datasets.

## Leadership Experience

- Contributed to securing **7.5 lakh** in sponsorship funding for Megathon, Hyderabad's largest student-run hackathon.
- Took responsibility for organizing and conducting multiple events across campus, coordinating logistics and student teams.

## Relevant Coursework

Data Structures and Algorithms, Probability and Random Processes,
Linear Algebra, Real Analysis, Information and Communication, Database Management

## Technical Skills

- **Programming:** C, C++, Python
- **Systems:** Linux, POSIX, Process Management
- **Databases:** MySQL, Relational Schema Design, SQL
- **ML Tools:** PyTorch, NumPy
- **Tools:** Git, Bash, gdb