

KUSHAGRA AGRAWAL

+91 770984 5743 ◊ kushagraagrawalashoka@gmail.com

EDUCATION

B. Tech in Computer Science and Engineering

August 2024 - May 2028

International Institute of Information Technology, Hyderabad

CGPA: 9.92/10.00

HSC, Class XII

June 2022 - April 2024

Alpha Junior College, Mumbai, Maharashtra, **92.17%**

ICSE, Class X

March 2009 - March 2022

Ashoka Universal School, Nashik, Maharashtra, **98.80%**

TECHNICAL SKILLS

Languages

C, C++, Python, JavaScript, HTML/CSS, SQL

Core Subjects

Data Structures & Algorithms, Operating Systems, Database Systems,
Object Oriented Programming, Computer Networks

Tools & Platforms

Git, GitHub, Linux (Bash), VS Code, LaTeX

PROJECTS

Gas Analyzer

August 2025 - Present

- Designed a gas analyzer using MOX sensors (MQ series), which can detect specific gases present in a local environment.
- Used a slope-based ML model based on resistance changed, to facilitate accurate gas detection.
- Designed a GUI for the displaying the detected gas and it's trends, as well as graph visualization, used WiFi and LoRa for communication.
- *[Used C++, Arduino, Python]*

Docs++: A Mini Google Docs built in C

October 2025 - December 2025

Course Project for Operating Systems

- Designed and implemented a functional network file system supporting multiple client, storage server connections as well as concurrent reads and writes.
- Implemented core file operations (read, write, delete, find) ensuring data consistency.
- *[Used TCP sockets, caching using hash maps, and threads for concurrent access]*

Shell implementation in C

August 2025 - September 2025

- Implemented a customized bash-like shell, written completely in C.
- Implemented a wide range of commands including changing directory, listing directory contents, I/O redirection, piping, keyboard shortcuts and foreground and background process handling.
- *[Used C, POSIX APIs for all operations]*

C-Shark

September 2025 - October 2025

- Implemented terminal package sniffer(similar to Wireshark) in C.
- Implemented a layer by layer breakdown of each packet, supporting filtering by various protocols, recent session inspection, and graceful SIGINT/EOF handling.
- *[Used C, POSIX APIs, libpcap]*

Database Management System

October 2025 - December 2025

- Modeled a mini-world with 10+ entities using ER diagrams and conceptual schema design from the scratch.
- Implemented a python application for CRUD operations, and retrieve data based on queries.

· *[Used Python, SQL, Data Modeling]*

ACHIEVEMENTS & ACTIVITIES

- Active member of the Public Relations team of the **Entrepreneurship Cell** of IIITH.
- Active member of the **Debate Society** of IIITH.
- Secured a percentile of **99.94** in JEE Mains 2024 among 12.5 lakh candidates.
- Secured **All India Rank 1393** in JEE Advanced 2024 among 1.8 lakh candidates.
- Secured **98.80%** in ICSE Class X Board Examinations.
- Was a part of the Dean's list 1 (top 5% of branch) for Monsoon 2024 and Spring 2025 semesters at IIITH.
- Secured the **Third position** in **Megathon 2024** for the OSDG prompt