

# KUSHAGRA AGRAWAL

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## EDUCATION

|   |                         |
|---|-------------------------|
| <b>B. Tech in Computer Science and Engineering</b><br>International Institute of Information Technology, Hyderabad<br><b>CGPA: 9.92/10.00</b> | August 2024 - May 2028  |
| <b>HSC, Class XII</b><br>Alpha Junior College, Mumbai, Maharashtra, <b>92.17%</b>   | June 2022 - April 2024  |
| <b>ICSE, Class X</b><br>Ashoka Universal School, Nashik, Maharashtra, <b>98.80%</b>   | March 2009 - March 2022 |

## TECHNICAL SKILLS

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|------------------------------|---|
| <b>Languages</b>             | C, C++, Python, JavaScript, HTML/CSS, SQL   |
| <b>Core Subjects</b>         | Data Structures & Algorithms, Operating Systems, Database Systems, Object Oriented Programming, Computer Networks |
| <b>Tools &amp; Platforms</b> | Git, GitHub, Linux (Bash), VS Code, LaTeX   |

## PROJECTS

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| <b>Gas Analyzer</b>   | 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]   |                       |

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| <b>Docs++: A Mini Google Docs built in C</b><br><i>Course Project for Operating Systems</i>  | October 2025 - December 2025 |
| · 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.  |                              |

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| <b>Shell implementation in C</b>   | 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. |                              |

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| <b>C-Shark</b>   | 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. |                               |

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| <b>Database Management System</b>   | 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

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- 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