

VEMPATI KEERTHI

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Education

International Institute of Information Technology Hyderabad <i>Bachelor of Technology in Computer Science and Engineering</i>	2023 – 2027
Rajiv Gandhi University of Knowledge Technologies <i>Pre-University Course (11th & 12th Class)</i>	2021 – 2023

Experience

Learning Management System (EdTech Platform) MERN Stack	April 2025
<ul style="list-style-type: none">Developed a comprehensive online learning platform for an NGO with multi-role architecture supporting Super Administrators, Administrators, Teachers, and Students across multiple courses and batches.Implemented a scalable content management system supporting text documents, PDFs, audio files, and video content with assignment submission tracking and individual progress monitoring.Built interactive communication channels between faculty and participants, secure user authentication, and a responsive design using React.js frontend, Node.js/Express.js backend, and MongoDB database.	

Projects

Buy-Sell @ IIITH MERN Stack	February 2025
<ul style="list-style-type: none">Developed an e-commerce platform for the IIIT community with user authentication, product management, and AI-powered chatbot support using React, Express/Node.js, and MongoDB.	

Network File System C, Operating Systems	October 2024
<ul style="list-style-type: none">Designed a distributed file system with Naming Server and Storage Servers supporting read/write operations, file streaming, copying, and replication for fault tolerance with proper synchronization mechanisms.	

C-Shell C, Operating Systems	September 2024
<ul style="list-style-type: none">Built a fully functioning shell with command parsing, job control, directory navigation, file listing, history management, and file search with process management and I/O redirection capabilities.	

XV6 Operating System Enhancements C, Operating Systems	September 2024
<ul style="list-style-type: none">Extended XV6 kernel with additional system calls and implemented advanced scheduling algorithms (Round Robin, LBS, MLFQ), enhancing low-level system programming skills.	

Image to Video Converter Flask, JavaScript, Python	March 2024
<ul style="list-style-type: none">Created a web application for converting uploaded images into videos with audio features, implementing user authentication and secure file upload systems.	

Technical Skills

Languages: C/C++, Python, JavaScript

Frameworks: React, Express.js, Flask, FastAPI, Next.js

Libraries: pandas, NumPy, Matplotlib

Databases: MongoDB, MySQL

Tools & Technologies: Docker, Bash Scripting, Git & GitHub

Coursework

Data Structures and Algorithms | Introduction to Software Systems | Computer Systems Organization

Operating Systems and Networks | Machine and Data Learning | Internet of Things

Design and Analysis of Software Systems | Probability and Statistics | Digital Systems and Microcontrollers

Algorithms Analysis and Design | Automata Theory | Data and Applications | Embedded Systems and Workshop