VEMPATI KEERTHI

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Education

International Institute of Information Technology Hyderabad   **2023 – 2027**
Bachelor of Technology in Computer Science and Engineering

Rajiv Gandhi University of Knowledge Technologies   **2021 – 2023**
Pre-University Course (11th & 12th Class)   *CGPA: 8.94*

Experience

Learning Management System (EdTech Platform) | *MERN Stack*   **April 2025**
- 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**
- 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**
- 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**
- 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**
- 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**
- 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