

Vempati Keerthi

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Education

International Institute of Information Technology Hyderabad

Bachelor of Technology in Computer Science and Engineering

2023-2027

Projects

Learning Management System — React.js, Node.js, MongoDB

April 2025

- Built an educational platform with multi-level user roles, course management, assignment systems, and content organization for Eklavya Foundation.
- Designed responsive UI/UX with features like progress tracking and assessment tools.
- [\[GitHub\]](#)

Buy-Sell @ IIITH — MERN Stack

February 2025

- Developed an e-commerce platform for IIIT community with user authentication, product management, and AI-powered chatbot support.
- Utilized React for frontend, Express/Node.js for backend API, and MongoDB for database management.
- [\[GitHub\]](#)

C-Shell — Operating Systems and Networks

September 2024

- Built a fully functioning shell with features like command parsing, job control, directory navigation (hop), file listing (reveal), history management (log), and file search (seek).
- Implemented process management with proper signal handling and I/O redirection capabilities.
- [\[GitHub\]](#)

Network File System — Operating Systems and Networks

October 2024

- Designed a distributed file system with Naming Server and Storage Servers supporting operations like read/write, file streaming, copying, and replication for fault tolerance.
- Implemented proper synchronization mechanisms and network protocols to ensure data consistency.
- [\[GitHub\]](#)

Image to Video Converter — Flask, JavaScript, Python

March 2024

- Created a web application allowing users to convert uploaded images into videos with audio features.
- Implemented user authentication and secure file upload systems with proper validation.
- [\[GitHub\]](#)

XV6 Operating System Enhancements — Operating Systems

September 2024

- Extended XV6 kernel with additional system calls (getSysCount, sigalarm) and implemented advanced scheduling algorithms (Round Robin, LBS, MLFQ).
- Enhanced technical skills in low-level system programming and kernel development principles.
- [\[GitHub\]](#)

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 • Software Systems • Computer Systems Organization • Operating Systems and Networks • Machine and Data Learning • Internet of Things