

DEEPAK SINGH

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Education

International Institute of Information Technology, Hyderabad

Master of Technology, Computer Science and Information Security

Telangana, India

July 2022 - Present

Army Institute of Technology

Bachelor of Engineering, Computer Engineering

Maharashtra, India

july 2017 - June 2021

Projects

Distributed IOT Based App Deployment Platform:

- Collaborated in a team of three to design and develop from IoT devices onto our platform, and designing a database for sensor registration.
- A platform that will have all the necessary components required to build and run IOT based application. It will also have monitoring and fault tolerance services for deployed applications.
- Instances of sensors and controllers can be configured and used as a service by the deployed application.

PeerShare - P2P Filesharing:

- A group-based file sharing system where users can share and download files from the group they belong to.
- Authentication is done for the users. Download is parallel with multiple pieces from multiple peers. SHA1 hash is used to verify that each chunk is not corrupted.
- Two trackers are implemented for fault tolerance and load balancing. Random first and Rarest piece first Piece selection algorithms are implemented for downloading from peers.

Eigenface-Based Facial Recognition System:

- Implemented a facial recognition system using Principal Component Analysis (PCA), leveraging Eigenfaces to represent and recognize distinct faces in a dataset.
- Demonstrated the reconstruction of images using different numbers of principal components, showcasing the trade-off between reconstruction quality and computational efficiency and visualized the mean face (Eigenface), providing an overview of the average facial features with the dataset.
- Evaluated the facial recognition module's accuracy. Achieved an impressive accuracy rate of 97.5 percentage across a range of 50 to 360 principal components.

Terminal File Explorer:

- Made a File Explorer in Linux Terminal using C++. It provides Normal and Command Mode.
- In normal mode we can navigate through the directories and open files in vi.
- In command mode commands such as copy, move, rename, create, delete, search and goto can be executed.

Relevant Coursework

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|--------------------|-----------------------|-------------------|----------------------|
| • Operating System | • Data Structures and | • Software System | • System and Network |
| • Computer Network | Algorithm | Development | Security |

Technical Skills

Languages: C++, Python, JavaScript, Bash, SQL

Developer Tools: VS Code, GIT, MySQL, Docker, Kafka

Platforms: Linux, Windows, Azure VMs

Activities/ Volunteer Experience

- **GATE CSE 2021:** Secured a 99.21 percentile in GATE CSE 2021
- **Inter-college basketball tournament:** I was responsible for arranging hospitality for all the teams visiting for the inter-college basketball tournament. I effectively coordinated with various departments and made sure that the visiting teams had a comfortable stay.