

MAYANK TADALA

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EDUCATION

International Institute of Information Technology Hyderabad

B.Tech in Computer Science and Engineering and MS by Research

Vikas the Concept School

Class XII CBSE; 84%

Hyderabad, India

Expected: 2028

Hyderabad, India

2022

EXPERIENCE

Undergraduate Researcher at CSTAR@IIIT-H

Centre for Security, Theory and Algorithmic Research @ IIIT Hyderabad

May 2025 - Present

Hyderabad, India

- Exploring theoretical foundations of Reinforcement Learning (RL), including convergence properties and policy evaluation techniques.
- Implementing core RL algorithms (e.g., Q-learning) from scratch to gain practical understanding and test theoretical insights.
- Preparing to apply RL algorithms in the context of Large Language Models (LLMs) for instruction fine-tuning and reward modeling.

Application Developer

Perceptive Analytics

Jan 2025 – April 2025

- Developed a Telugu Input Mobile Application for android with Speech to Text and Handwriting to Text.
- Project was done as part of requirements for the Design and Analysis of Software Systems course at IIIT-H

Summer Intern at SERC@IIIT-H

Virtual labs

May 2025 – July 2025

- Worked on standards for integration of VLabs into Learning Management Systems.
- Worked with various standards such as LTI, eDX, SCORM, QTI

PROJECTS

Custom Linux Shell

GitHub

- Linux shell, written in C. Support for process management, piping/redirection and built-in as well as system commands
- Enabled user-defined aliases for enhanced customization.

Machine Learning Techniques Implementations - Classical and Deep Learning

GitHub

- Implemented core ML algorithms (Linear Regression with Regularization, Decision Trees, PCA) and applied them to real-world problems like fraud detection and delivery time prediction.
- Built Deep Learning models from scratch (MLP for regression/classification, Variational AutoEncoder) and applied them on datasets like MNIST and Bangalore housing data.

Networking File System

GitHub

- This project implements a basic Network File System (NFS) using a client-server architecture with a Naming Server, Storage Servers, and Clients. The key components work together to manage file storage and ensure that clients can access and modify files across multiple storage servers
- The system facilitates file operations such as reading, writing, copying, deleting, and streaming audio files.

BuySell-web

GitHub

- Constructed a full-stack e-commerce marketplace with secure OTP-based transaction verification.
- Built robust authentication using JWT and CAPTCHA to prevent unauthorised access.

TECHNICAL SKILLS

- **Programming:** Python, C/C++, Java, Kotlin, JavaScript, OOPS
- **Development:** HTML5, CSS3, React.js, Node.js, Flask, REST APIs, Android SDK, Jetpack, UI/UX Design, Agile, Automated Testing, Test Driven Development, Continuous Integration
- **Databases:** MySQL, MongoDB, CockroachDB
- **Environments/Tools:** Unix/Linux, Git, Docker, OpenAI Gymnasium, MiniGrid, Pandas, NumPy

RELEVANT COURSES

- Computer Programming, Data Structures and Algorithms, Operating Systems and Networks, Database Management Systems, Statistical Methods in AI, Linear Algebra, Probability and Statistics, Machine Data and Learning, Design and Analysis of Software Systems