GUNTESH SINGH

Motivated and inquisitive undergraduate student at IIIT Hyderabad with a strong interest in programming, problem-solving, and algorithmic thinking. Passionate about data structures, algorithms, and software development. Enthusiastic about exploring system architecture, open-source contributions, and the intersection of technology and innovation. Seeking opportunities to learn, grow, and apply technical skills in real-world scenarios.

EDUCATION

International Institute of Information Technology, Hyderabad

- Bachelor of Technology in Computer Science, 2024-Present
- Master of Science in Geospatial Technology, 2024-Present
- Expected Graduation: August, 2029

MDS Public School, Udaipur

- Senior Secondary Education (12th Grade): 2023-2024
- Passed with overall 94.4%

St. Anthony's Sr. Sec. School, Udaipur

- Secondary Education (10th Grade): 2021-2022
- Passed with overall 92.6%

SKILLS

- Programming Languages: C, C++, Python, JavaScript, AT&T syntax x86-64 assembly
- Bash, HTML, CSS, SQL, NoSQL, NumPy, Matplotlib, Rest APIs, NodeJS
- Data Structures and Algorithms
- Geographic Information Systems
- Remote Sensing
- Data Analysis
- Team Collaboration and Leadership
- Time Management
- Problem Solving

EXPERIENCE

Past Projects:

- Smart Home Security System with OM2M and ThingSpeak Integration
- C Shell: A replica of the bash terminal with custom commands.
- File Manager Using only Low-Level System Calls.
- C program for TCP and UDP protocols, supporting file transfer and real-time chat.
- Terminal Packet Sniffer
- Custom xv6 Kernel:
  - Demand Paging, Page Fault Handling, FIFO Page Replacement
  - Advanced Scheduling (CFS/FCFS)
- Python-Based Compiler (Tokenization and CFG Parsing)
- Spatio-Temporal Analysis of Urbanization and Land Surface Temperature (LST) using Satellite Data.

Current Projects:

- Graph-Theoretic Stock Market Modeling and Portfolio Optimization using algorithms
- Embedded Sleep Monitoring Device (EMG/Gyroscope) – Team Lead
- Spatio-Temporal Mapping and Analysis of Agricultural Cycles (Cropland vs Non-Cropland)
- Relational Database System Design and Implementation
- Distributed File System (DFS) with Sentence-Level Locking for Collaborative Editing

For more information, please visit my personal page:
astr0lynx.github.io