# HARSHA VARDHAN REDDY GUTHI

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## **EDUCATION**

Indian Institute of Technology, Hyderabad

November 2021 - Present

B.Tech, Computer Science and Engineering

April 2019 - August 2021

CGPA: 8.91/10

Sri Chaitanya Junior College, Vijayawada

Percentage: 98.1

Intermediate Education, MPC

## TECHNICAL STRENGTHS

**Programming Languages** C/C++, Python, RISC-V Assembly, p4(basics)

Frontend React, TailwindCSS, HTML, CSS

Backend Node.js

Database PostgreSQL, MySQL, MongoDB Web Technologies Kubernetes, Minikube, istio (basics)

Operating systems Windows, linux

Other tools and technologies Git/GitHub, LateX, SolidEdge

### RELEVANT COURSES

- Computer Science: Data Structures and Algorithms, Operating Systems, Data Base Management System, Computer Architecture, Software Development Fundamentals, Software Engineering, Compilers, Theory of Computation, Introduction to Programming.
- AI: Introduction to AI, Foundations of Machine Learning, Deep Learning.
- Mathematics: Discrete Maths, Introduction to Probability, Calculus, Linear Algebra, Tensors.

#### **PROJECTS**

### Community Q&A Website

February 2023

- · Developed a primitive Q&A website for accessing information, solving problems, and exchanging ideas.
- · Implemented features like creating, editing and deleting questions, answers, upvotes, downvotes, user authentication, paging, user search, multi-tag search, filters.

eDHCP November 2023

· It is an extension to DHCP which ensures security for both server and client enabling simultaneous authentication. The security is established via certificates facilitated by asymmetric key-based authentication. Used mininet environment for implementation.

Kaggle Project November 2023

- · Conducted preprocessing on the input data like feature selection using heatmaps and predicting missing values through k-NN prediction and imputation.
- · Trained various ensemble models such as Random Forests, Adaboost, and Gradient Boosting, to analyze the dataset and make predictions.

### Resource Sharing and Synchronization

February 2022

- · Implemented TAS, CAS, and Bounded CAS mutual exclusive algorithms for the synchronization of various threads that share a common lock.
- · I developed a multithreading program to synchronize interactions between an Ice Cream Vendor and Families for selling and refilling ice creams using C++ threads, semaphores, and mutex locks.