HRUDAY CHOWDARY GURIJALA

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EDUCATION

Indian Institute of Information Technology, Sri City

B. Tech in Electronics and Communications - CGPA - 7.68

Sri Chaitanya Junior College

Board of Intermediate Education - Percentage - 96.7%

Dec 2021 - May 2025

Chittoor, Andhra Pradesh

June 2019 - May 2021

Vijayawada, Andhra Pradesh

PROJECTS

Code It \(\omega\) | MongoDB, Express.js, React, Node.js

May 2024

- Developed a high-performance search engine using the MERN stack, incorporating modern web technologies to deliver a seamless user experience.
- Scraped and processed a diverse dataset of 3,500 problems from leading coding platforms (LeetCode, InterviewBit, Codeforces) using Selenium, ensuring a comprehensive collection of programming challenges
- Utilized the BM25 algorithm and TF-IDF indexes to rank documents efficiently against query strings, and optimized search speed by leveraging RAM-based indexes and efficient data structures to enhance search performance.
- Live site here

Learnflow (MongoDB, Express.js,ejs, Node.js

May 2024

- OAuth 2.0 authentication, enabling users to securely sign in with their Google accounts.Implemented a role-based access control system, differentiating between "Creator" and "Student" roles. Creators have the privilege to upload and post learning videos, while students have access to view the posted videos.
- Leveraged AWS services, specifically S3 bucket and CDN, for efficient storage and delivery of uploaded videos and images. Implemented the use of Pre-Signed URLs to allow direct uploads to the S3 bucket, eliminating the need for backend server involvement and ensuring optimal performance.
- Live site here

Formula 1 stats app \bigcirc | React-native, navigation, Typescript

Dec 2024

- Developed a Formula One mobile app using React Native, integrating the Formula One API to provide real-time driver and constructor standings, detailed profiles, and schedules..
- Implemented seamless navigation with React Navigation and optimized data fetching to enhance user experience for Formula One enthusiasts.

Smart Classroom () Python, Raspberry Pi, React, Fast API, Typescript

Nov 2024

- Engineered a Smart Classroom system using Raspberry Pi, integrating DHT11 sensors and a camera to monitor temperature, humidity, and real-time occupancy through OpenCV-based image processing.
- Developed a full-stack solution with a React frontend for live data visualization and suggestions for air conditioning, supported by a backend API for seamless sensor and image data communication.
- Demo video

RESEARCH

Design Of efficient full-adder using QCA | QCA Designer, QCA Pro

Apr 2023

• Designed an efficient QCA full adder using XOR and majority gates, achieving a 16.95% reduction in cell count, 22.22% cost function improvement, and lower latency, validated for advanced digital systems like microprocessors. (Not published yet)

Deep Learning based cooperative relay selection in V-MIMO | Python, Tensorflow

Dec 2024

• Developed a deep learning-based prediction algorithm for VAA cells, achieving 35% faster discovery with 98.2% accuracy, ensuring security with a cryptographic algorithm for IoT networks.(Not published yet)

TECHNICAL SKILLS

Languages: Python, C, C++, JavaScript, SQL, NoSQL, R

Technologies/Frameworks:Docker, AWS, FastAPI, RestAPI, Rstudio, Bootstrap, Express, Node.js, React.js, React Native CLI, TensorFlow, Keras, OpenCV

ACHIEVEMENTS

- Solved 350+ coding problems across different platformslike leetcode, CSES, geeksforgeeks, ATcoder.
- Leetcode Contest Rating: 1411
- Cleared the internal hackathon in college and kept waitlist for Smart India Hackathon 2021.