

VENKAT K. UDITYA

Vellore Institute of Technology, Chennai

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EDUCATION

Vellore Institute of Technology, Chennai
B.Tech Electronics and Computer Engineering
CGPA: 8.80

2021-2025

Narayana E-techno, Bengaluru
Class 12 CBSE (PCMC)
Boards - **94.6 percentage** JEE mains - **92.4 percentile**

2019-2021

TECHNICAL STRENGTHS

Computer Languages	Python, Java, C, C++, Assembly Language, R, SQL, HTML, JavaScript, Angular
Tools	Cisco Packet Tracer, GStreamer, Netsim, Matlab, Keil uVision
Coursework	Data Structures and Algorithm, Computer Network, Compiler Desing, Operating Systems, AI-ML, Linear Algebra, Data Analytics, WebDev, Digital Signal Processing, Embedded System Design, Embedded C

PROFESSIONAL EXPERIENCE

C-DOT (Centre for Development of Telematics)

June 2024 - July 2024

Student Intern

Bengaluru

- Utilized **GStreamer**, **bash scripting**, and networking knowledge for automated conference media processing, developing a multi-user system for streaming audio and video, matching Ethernet interfaces to port numbers via IPv4, and generating log files to monitor packet transfers.
- Implemented multicast video conferencing, combining audio and video with **mpegt smux** for easy access via VLC Media Player using a multicast IP and port.

Kloudgin

September 2024 - present

Consultant

Bengaluru

- Worked on continuous enhancement and bug-fixing tasks in an enterprise **Angular TypeScript** codebase, collaborating with senior developers.
- Analyzed assigned tasks and cases by inspecting affected components, reproducing issues, and reviewing relevant modules.

PROJECTS AND COURSES

Automated Vehicle Access Control System Using License Plate Recognition

- Designed a smart parking system using deep learning models (InceptionResNetV2 for detection, MobileNetV2-EfficientNetV2 for OCR) to automate vehicle access via license plate recognition.
- Achieved **98.59%** accuracy and **0.973** F1 score; optimized the system for real-time performance on edge devices for scalable campus deployment.

3D SECDED Hamming code for robust data transmission

- Designed an error-correcting algorithm for encoding 8-bit data into 21-bit codewords using matrix transformations and parity checks to ensure data integrity. Implemented in **python**

- Implemented an efficient error correction process, accurately identifying and correcting transmission errors, enhancing data reliability and accuracy in the communication system.

Design and Implementation of an APB to AHB Bridge for High-Performance SoC

Maven-Silicon

- Designed and implemented a **Verilog HDL** bridge between the Advanced Peripheral Bus (APB) and Advanced High-Performance Bus (AHB) using **ModelSim** for simulation and verification.
- Utilized **Quartus Prime** to create a flowchart for the simulation..

Morse Code FlashLight using 8051

- Engineered a Morse Code Flashlight using an **8051 microcontroller**, translating input sentences into Morse code and controlling LED light pulses.
- Developed a precise Morse code translation algorithm and implemented LED control mechanisms with accurate timing for dot, dash, inter-character, and inter-word spacing on **Keil platform**.

AWARDS AND CERTIFICATION

NPTEL - Robotics and Control, Theory and Practice, IIT Roorkee (one of only 117 students to pass this course)

Spoken tutorial project from IIT Bombay on C,C++, Python

Rev-up Arduino level3, from VIT Chennai

VLSI Design Internship, Maven Silicon, Bengaluru

Google Cloud Computing Foundation