

MEDHINEE PADORTHY

+91 98449 42196 | medhineesrinivas@gmail.com |

GitHub: <https://github.com/MedhineePadorthy> |

LinkedIn: <https://www.linkedin.com/in/medhinee-padorthy-b27718322>

Education

National Institute of Technology Karnataka (NITK) — B Tech in Electronics & Communication Engineering 2022 – 2026 | CGPA: 8.92 | Minors in AI: CGPA 9.25

Narayana E Techno School, Bangalore — PUC 2020 – 2022 | Percentage: 92.4%

Narayana Olympiad School, Bangalore — SSLC 2020 | Percentage: 96.6%

Projects

Low Power Thermometer Code to Digital Converter

Jan 2025 – Apr 2025

- Designed a 15:4 thermometer-to-binary converter using Wallace Tree.
- Developed and compared 10T vs. 28T full adder cells using Cadence Virtuoso.
- Achieved lower power with 10T design.
- GitHub: <https://github.com/MedhineePadorthy/-Implementation-of-Low-Power-Thermometer-Code-to-Digital-Converter-Using-Wallace-Tree-Encoder->

Efficient Parallel Execution of Neural Networks

Jan 2025 – Apr 2025

- Implemented ANN for multi-class classification.
- Used OpenMP (Types 1 & 2) and MPI for parallelism.
- Type 1: All loops were parallelized
- Type 2: Only computationally intensive loops were parallelized
- Achieved better performance with OpenMP Type 2.
- GitHub: <https://github.com/MedhineePadorthy/Efficient-Parallel-Execution-of-Neural-Networks->

32-Bit RISC-V Processor Design

Jan 2025 – Apr 2025

- Used OpenROAD for RTL-to-GDS flow.
- Completed synthesis using Yosys, floorplanning, placement, CTS, routing, timing analysis.
- Collected and analyzed slack, power, skew and area reports.
- Visualized comparisons through performance graphs.
- GitHub: <https://github.com/MedhineePadorthy/32-Bit-RISC-V-Processor->

Spam SMS Detection

Jul 2024 – Nov 2024

- Developed a text classification system to detect spam SMS using Machine Learning models.
- Implemented Naive Bayes model and compared with other algorithms such as Random Forest Decision Trees, KNN, Logistic Regression.
- Preprocessed data with tokenization, stemming, and TF-IDF.
- Evaluated models using accuracy precision achieving optimal results with Naive Bayes models.
- GitHub: <https://github.com/medhineepadorthy/SPAM-SMS-DETECTION>

Arduino-Based Medication System

Jul 2024 – Nov 2024

- Designed timed dispenser with LED, buzzer, LCD alerts.
- GitHub: <https://github.com/medhineepadorthy/Arduino-based-medication-system>

6-bit Fully Differential Current Steering DAC

Jul 2024 – Nov 2024

- Implemented with PMOS current sources, row- column decoder.
- Achieved a full-scale peak-to-peak output voltage range of 1.6V
- Analyzed INL/DNL under mismatch conditions.
- GitHub: <https://github.com/medhineepadorthy/Fully-Differential-Current-Steering-DAC-6bit->

AI-Based Smart Farming System

Jan 2024 – Apr 2024

- Developed ML-based crop recommendation system.
- GitHub: <https://github.com/MedhineePadorthy/AI-Based-Smart-Farming-System>

FPGA-Based Electronic Voting Machine

Jan 2024 – Apr 2024

- Designed a secure electronic voting machine using FPGA technology
- Focused on enhancing reliability and accuracy in digital voting systems
- GitHub: <https://github.com/MedhineePadorthy/FPGA-Based-Electronic-Voting-Machine>

HYDROSURE: Smart Irrigation System

Sep 2023 – Dec 2023

- Automated irrigation using sensors, encoders, logic circuits.
- GitHub: <https://github.com/MedhineePadorthy/HYDROSURE-Smart-Irrigation-System>

Relevant Coursework

Analog Electronics, Digital Electronics, VLSI & CAD, Mixed Signal Design, Low Power VLSI, Circuits & Systems, AI, Deep Learning, Data Science, DSA, Microprocessors, Soft Skills (NPTEL)

Technical Skills

Languages: Verilog, Python, C, ARM7 Assembly

Tools: Cadence Virtuoso, Xilinx-Vivado, OpenROAD, Keil uVision4, LTspice, Ngspice, Arduino IDE

Achievements & Extras

- Smile Club – NEP Member at NITK (Community Service)
- Completed ML & DL online courses
- Scored 99.15 percentile in JEE Mains (2022)
- Ranked AIR 561 in KCET, 1437 in COMEDK
- Guided juniors in JEE Mathematics