YANDAMURI BALA BRAHMARSH

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19th July 2005

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Flat no:S-1, M.R. GARDENS, RAJA RAJAN NAGAR MAIN ROAD, MOULIVAKKAM, Chennai, 600125, India

SUMMARY

Final-year Electronics and Communication Engineering undergraduate with strong foundations in digital logic design, computer architecture, and embedded systems. Experience translating system requirements into hardware-aware implementations, with exposure to RTL-level thinking, performance optimization, and verification concepts. Actively building skills in Verilog/SystemVerilog, ASIC design flow, and hardware verification with a strong interest in large-scale data center accelerators.

EDUCATION

B.Tech Electronics and Communication Engineering, *SRM IST-Ramapuram* 2026
CGPA-8.21/10

Class XII- CBSE, *SRI KRISH INTERNATIONAL SCHOOL* 2022
Percentage-57.6%

Class X - CBSE, *NARAYANA E-TECHNO SCHOOL* 2020
Percentage - 61%

SKILLS

Embedded Systems: Microcontrollers, Sensor Interfacing, Embedded C, IoT Systems

Digital Design & Architecture: Digital Logic Design, FSMs, Timing Analysis, Computer Architecture | Fundamentals

HDL & Hardware Design: Verilog, RTL Design Concepts, HLS (conceptual)

Programming & Scripting: C, Python, C++ (Basic)

Operating Systems: Linux (Basic)

Tools & Platforms: Linux, Raspberry Pi / RP2040, Git

Version Control: Git (Basic)

Debugging & Analysis: GDB (basic), logic debugging

WORK EXPERIENCE

NIDEC CONTROL TECHNIQUES, *INTERNSHIP IMPLANT TRAINEE* 12/2024 – 12/2024 | Chennai, india
- Exposed to industrial embedded drive systems used in windmill and automation applications.
- Observed hardware reliability, performance constraints, and system-level trade-offs in industrialdrive systems.
- Assisted R&D teams in understanding system behavior, reliability, and performance considerations.

V.I MICROSYSTEMS, *INTERNSHIP* 07/2023 – 07/2023 | Chennai, india
- Acquired extensive experience in embedded systems and Internet of Things (IoT) using Raspberry Pi 2040 microcontroller.
- Designed and implemented practical projects emphasizing system integration and sensor interfacing.
- Focused on IoT protocols to strengthen technical expertise in modern embedded technologies.
- Strengthened understanding of hardware–software interaction and system timing behavior.

PROJECTS

TETRABOT (QUADRAPLED MECHANISED ROBOT) 01/2025 – 08/2025
- *Designed FSM-based control logic for coordinated motor control.*
- *Implemented timing-critical control paths with real-time sensor feedback.*
- *Analyzed latency, execution timing, and resource usage.*
- *Debugged concurrency and signal interaction issues.*

TRAFFIC ANALYSIS USING MACHINE LEARNING 08/2024 – 11/2024
- *Processed real-time and historical sensor data for traffic congestion analysis.*
- *Worked on data preprocessing pipelines and performance-aware Python implementations.*
- *Built data preprocessing pipelines with an emphasis on computational efficiency.*
- *Gained exposure to system-level thinking involving sensors, data flow, and computation efficiency.*

IR PROXIMITY SENSOR 01/2024 – 02/2024
- *Designed and implemented an IR proximity sensing system using op-amps and comparators.*
- *Studied thresholding, noise margins, and signal reliability.*

- *Strengthened understanding of hardware interfacing and low-level signal behavior.*

EMSLS (Electromagnetic space launch system) 07/2023 – 11/2023

An electromagnetic space launch system utilizes magnetic fields to accelerate spacecraft along a predetermined track, thereby reducing fuel dependency. It uses linear motors or coil guns to achieve high velocity. This aims to offer a sustainable, reusable, and rapid launch method, making it more efficient for satellite and cargo.

TECHNICAL INTERESTS

- ASIC Design & Verification
- Data Center Accelerators
- Low-Power Digital Design
- Hardware Performance Optimization.

COURSES

Digital Business Services Job Simulation, *HSBC* 03/2025

PYTHON FOR DATA SCIENCE, *NPTEL* 02/2025

GEO DATA Processing using Python, *ISRO* 08/2024

orCAD PSpice, *LIVEWIRE* 05/2023

LANGUAGES

ENGLISH: Professional Working Proficiency | **TELUGU:** Native Speaker | **HINDI:** Fluent | **TAMIL:** Fluent

VOLUNTEERING

Design Head 11/2024

Volunteer 06/2024

Volunteer 02/2023

LINKS

LinkedIN

GitHub