Maganti Shanmukha Sri Datta

Contact Number: +917702464493
Email : magantishanmukhasridatta@gmail.com
Hyderabad, Telangana, India
LinkedIn

Course	College/University	Year	CGPA/%
MTech. VLSI Design	Amrita University, Coimbatore	2024-26	7.38
BTech. Electronics and Communication	Geethanjali College of E&T	2020-24	8.5
Intermediate/+2	St. Patrick's Jr. College	2018-20	91.3
High School	St. Joseph's Public School (ICSE)	2018	76%

WORK EXPERIENCE

- **IIT Guwahati | Summer Intern | Embedded C** **[May (2023) – July (2023)]**
  - Developed a protype of Smart Parking using VEGA Processor which is developed by CDAC.
  - Interfaced protype with mobile notification using Adafruit IO and IFTTT App.

PROJECTS

- **Implementation of an Image Processing Algorithm | Zynq Ultra Scale + MPSOC | Verilog / HLS (Currently doing)**
  - Currrently in the starting phase of the project going through literature surveys to understand how an algorithm can be implemented in a FPGA board
- **Optimization Of Leakage Power Dissipation In CMOS Inverter Using Self Biased And W/L Scaling Techniques**
  - Designed and simulated CMOS inverters using techniques like self-biasing, W/L scaling, and stacking in LTSpice, achieving significant leakage power reduction with power-delay trade-off evaluation for energy-efficient VLSI design.

  Link : Report of the project
- **Implementation of Stack Processor**
  - Developed a Verilog-based stack processor with a 16-element LIFO architecture, supporting arithmetic (ADD, SUB, MUL, DIV) and logical (AND, OR, XOR, NOT) operations. Designed stack memory and control logic for efficient PUSH/POP operations, verified through testbench simulations for accurate functionality.

  Link : Report of the project
- **Implementation of Two Stage Operational Amplifier**
  - Designed, simulated, and created a layout for fabrication of a two-stage operational amplifier using PMOS and NMOS transistors in CADENCE

  Link : Poster of the project
- **Smart Traffic and Pollution Control System | Arduino MEGA | Embedded C**
  - The development and testing of the prototype system aimed at integrating smoke detection, traffic signal control, and audio feedback for pollution-based traffic management have yielded promising results.

  Link : Project Report
- **Fingerprint Authentication Voting Machine | Arduino UNO | Embedded C | GSM Technology**
  - If the fingerprint matches, the voter can cast their vote; if not, a buzzer rings, and an intruder alert is displayed, while spot registration allows missing voters to register and vote.

WORKSHOPS ATTENDED

- **VERZEO | Python | Machine Learning** **[April (2022) – May(2022)]**

  Developed a machine learning model to detect fake news using sklearn, seaborn, and matplotlib.
- **Internship | One Stop | RoboAnalyzer** **[September (2021) – November (2021)]**

  Gained hands-on experience with RoboAnalyzer for Forward and Inverse Kinematics by configuring robot parameters like link, length and twist angle.

SKILLS & INTERESTS

- **Programming Languages** : Verilog , System Verilog , Python , C Embedded C
- **Tools and Technologies** : Xilinx Vivado, HLS, Multisim, LT Spice, Keil u Vision, CADENCE, SYNOPSYS (DC Compiler), Google Colab, Jupyter Notebook

ACHIEVEMENTS

- Shortlisted one of the top 10 teams for **INTEL AI Hackathon** and presented the project titled **AI – Powered Predictive Maintenance** at **IIT Kharagpur** on 21st December, 2024.

- Awarded with **first prize in Navarith Pradarshan 2022** for the project exhibition conducted as a part of the Project Based Learning in **Geethanjali College of Engineering and Technology.**

- An Article "Language and Technology" **was published in AIP Publications on 04th October,2023.** This article provides for learners to utilize the opportunities to read and learn beyond classroom using google resources.
  Link : PDF of the Publication

- Secured **Second prize** for PBL expo titled **design and implementation of two stage operational amplifier using cadence tools**

RELEVANT COURSE CERTIFICATIONS

- Python Course. **Link :** Certificate
- Verilog Programming for Digital Design. **Link :** Certificate
- Two Week Student Development Program of VLSI Design using CADENCE Tool **Link :** Certificate