Yatirajgouda Iranagouda Patil

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 Yatirajgouda_29
 yatirajgouda-patil

SKILLS

C Programming, Object Oriented Programming, Problem Solving, C++, Data Structures and Algorithms, Digital Circuits, Computer Networking, ARM LPC2148 Programming, 8051 Microcontroller and Assembly level Programming, Digital System Design using Verilog Programming, CMOS VLSI Circuits, Simulation using Cadence Virtuoso Software, Operating system, Java(basics), Machine Learning, HTML basics, CSS and Python basics.

EDUCATION   CGPA (till the end of 6th SEM) - 9.31

❖ B.E. Electronics and Communications – kle technological university hubli
❖ 2nd PUC - Aryabhata PU science college dharwad   - 94.16%
❖ 10th standard -Netaji subhas chandra bhose kannada medium school – 93.28%

PROJECTS

Project 1 | **Agri Predict: Crop Selection through Neural Networks For Sustainable Agricultural Growth**

- Agri Predict is a framework designed to help Indian farmers make optimal crop choices despite educational and informational constraints. Using Neural Networks, it predicts the best crops based on factors like soil nutrients, temperature, and humidity. The model's results show over 98% accuracy, proving its effectiveness in improving crop selection and yields.

Project 2 | **Ultrasonic Motor control: Bridging Distance with Precision**

- We developed a robotic arm system that changes direction upon detecting obstacles using an ARM Microcontroller (LPC2148 board) and an ultrasonic sensor to measure obstacle distance. Additionally, the system was implemented on a Cortex M3 development board, utilizing Tasks and Event registers in the code for efficient operation and response to environmental inputs.

Project 3 | **Active Filter Design Second Order Low pass and High Pass**

- We first studied the universal active filter and its working principles. Next, we simulated the filter using ideal operational amplifiers in Cadence Virtuoso. We then designed a two-stage differential amplifier, verified its performance, and replaced the ideal op-amp in the filter circuit. Finally, we simulated the modified circuit to achieve the low-pass, high-pass, and band-pass filter responses.

Project 4 | **8-bit Current Steering DAC using 180nm technology**

- We designed an 8-bit current-steering DAC using 180nm technology in Cadence Virtuoso. An 8-bit up-down counter provides inputs to the DAC through transmission gates that switch based on these inputs. A PMOS current mirror sinks current in a binary-weighted fashion, with a current reference generated by a V-I converter from a band-gap reference. Finally, all currents are summed and filtered by a buffer with a low-pass filter to produce the analog output signal (sine wave).

Project 5 | **Two Stage Differential Amplifier (7 pack Opamp)**

- Designed and verified a two-stage differential opamp (7-pack opamp) meeting all specifications, completing both schematic and layout.

HOBBIES

❖ Playing games like Chess, Cricket, Puzzles

❖ Daily exercise

❖ Watching movies

ACHIVEMENTS

- Hacker Rank – 3 Stars in C and problem solving

- Participated in 40 contests on Codechef

- Analog IC design Nptel Course (IIT Madras) cleared

Certificates

- Networking basics	Juniper networks (JUNOS)
- C++ Programming and Oops	Simulink onramp
- Data structures and Algorithms	
- Python for Machine learning	
- Machine Learning Algorithms	
- MATLAB onramp	
- Analog IC design NPTEL Course	