Saurabh Pramod Suryavanshi

saurabh_365@yahoo.com
https://www.linkedin.com/in/saurabhsuryavanshi19/
Phone: +39 348 349 3752
Address: Corso Corsica 11, Turin, Italy

Summary

Dedicated and ambitious Electronic and Telecommunications engineering student seeking a challenging and rewarding internship opportunity to apply theoretical knowledge and develop practical skills in embedded systems and microcontrollers.

Education

Bachelors in Electronics and Communications

Polythecnic University of Turin, Location: Turin, Italy *12/2017– present*

- Relevant coursework: Automatic Control, Electronic Circuits, Applied Electronics, Signals and Systems, Digital Transmission, Digital System Electronics, Electromagnetic Waves and Antennas
- GPA: 23.8/30.0

Skills

- **Digital Electronics**: Modeling digital circuits by means of Hardware Description Languages, programming modern configurable logic devices (FPGA) using FSM models, designing complex digital circuits through RTL level programming in C
- **Embedded Systems**: Developing microcontroller based applications using IDE tools starting from assigned specifications
- **Automatic Control**: Implementation and testing of control system models in Simulink, self-tuning PID Conrollers with Simulink, LQR controller design, implementiion of Analog to Digital Filters for specific applications
- **Applied Electronics**: Designing and testing small-scale analog systems, designing basic power supplies for electronic circuits using linear and switching regulators, configuring data acquisition systems based on signal characteristics
- **Software**: Matlab (Control Systems Toolbox, Digital Signal Processing Toolbox, Simulink), LTSpice, Quartus Prime, STM32CubeIDE, ModelSim
- **Hardware**: Analog Discovery, FPGA, STM32 Nucleo, Arduino
- **Programming**: C, C++, Python, VHDL, Verilog

Languages

- **English**: Native
- **Hindi**: Native
- **Italian**: Advanced
- **French**: Intermediate
- **German**: Intermediate
- **Spanish**: Intermediate

Projects

Analog Electronics

- Instrumentation amplifiers using operational amplifiers supplied from a single voltage supply
- Third order Chebyshev low-pass filter using filter design tool
- Threshold comparator with hysteresis
- Integrated asynchronous counters
- 4 bit Digital to Analog converter

Digital Electronics

- Designing and timing analysis of 16 bit arithmetic circuits like adders, subtractors, multipliers implemented in Data Path on DE1-SoC board
- Implementing Flip Flops and Synchronous counters in structural VHDL
- Designing Control Unit and Datapath for Finite State Machines using Look Up Table (LUT) and One Hot Coding
- Implementing digital filter including memories, datapath, and control unit to compute specific output function on FPGA board

Microcontrollers

- Generating waveforms using different mechanisms like polling, flags, input capture output compare, frequency tuning using potentiometer on STM32 nucleo board
- Implementing Interrupt Service Routines and handling multiple interrupts to manage various tasks by Low Level programming, manipulating Interrupt Routine Queue (IRQ)
- Measuring and modifying frequency and duty cycle of external inputs through input capture, pulse width modulation, analog to digital conversion, and direct memory access

Volunteer Work

Associazione ARIS

Mirafiori Sud, Turin, 12/2020 – 08/2021

- Tutoring high school students in Algebra, Geometry, and Physics according to Italian public school curriculum