Yashwanth Kumar VG

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EDUCATION

NIT TIRUCHIRAPPALLI
Instrumentation and Control Engineering
May 2024 | Tiruchirappalli, TamilNadu
Cur.CGPA: 8.46

NARAYANA JUNIOR COLLEGE
M.P.C
May 2019 | Kurnool, Andhra Pradesh
Percentage: 97.4

LINKS

Github: **Github.com**
LinkedIn: **LinkedIn.com**

COURSEWORK

UNDERGRADUATE
Data Structures and Algorithms
Operating Systems
Microprocessors and Microcontrollers
Real-Time Operating System (RTOS)
Computer Organisation and Architecture
Networking
Digital, Analog Electronics
Control Systems
Sensors and Transducers
Web Development
Autosar Architecture

SKILLS

PROGRAMMING
Over 5000 lines:
•Embedded - C • C++
Over 1000 lines:
•Verilog • Assembly • Python • Html
• CSS • JavaScript

MICROCONTROLLERS
•STM-32F103C8T6 (ARM CORTEX-M3)
• AVR-Atmega328p

PROTOCOLS
•I2C•SPI•UART•CAN

SOFTWARES
•Keil-Microvision5
• IAR Embedded Workbench
•STM32Cube IDE
•Proteus
•Arduino IDE •Visual Studio

PROJECTS

CMSIS AND PERIPHERALS DRIVERS FOR BLUE-PILL
July 2023 – Aug 2023 | NIT Tiruchirappalli
- Implemented Common Microcontroller Software Standard (CMSIS) and Peripherals Drivers for STM-32F103C8, aka Blue Pill, from Bare-metal programming using C-Language, reduces the User's programming effort to program this Microcontroller using Pre-programmed Peripherals Driver Functions.
- Keil-Microvision5 IDE is used for programming.

EXOSKELETON
May 2023 – July 2023 | NIT Tiruchirappalli

- Worked on Controlling Motors used in ExoSkeleton for Paraplegic patients provides powered hip and knee motion to enable individuals to stand upright, walk, turn, climb, and descend stairs.
- Modbus Serial Communication Protocol is used to Control the Motors.
- AVR Atmega 328p microcontroller is used.

DIGITAL DOOR LOCK SECURITY SYSTEM
Dec-2022
- Implemented a Password-based Lock Security System, which enhanced my Firmware development skills, with good exposure to hardware.

DIGITAL CIRCUITS DESIGN
July 2022
- Designed Alarm and Calculator completely with Combinational and Sequential Circuits, which enhanced my understanding of Digital Electronics.
- Proteus was used for Simulating the Circuits.

DELIVERY ROBOT
Jun 2022
- Reduced the manual Delivery Process by Automating the process using this Robot.
- Line tracking using IR sensors principle is used for navigating the path.

POSITION OF RESPONSIBILITY

3D-AEROMODELLING CLUB OF NIT TRICHY | TRONIX MEMBER
Jan 2021 – present
The prime focus of the club is to take up competitions and projects related to airborne vehicles, being a Tronix member, I am working on electronics and programming areas related to drones and RC planes.

PUBLICATIONS

[1] Actuator Selection for Lower Limb Exoskeleton Prototype Design for Paraplegic Patients.