DARSHNA PARMAR

Research and Development Engineer

PROFILE

Innovative and experienced Electrical Engineer from IITB with extensive knowledge of engineering principles, theories and standards in Automotive Industries.

CONTACT

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HOBBIES

Guitar Player
Star Gazing
Traveling

WORK EXPERIENCE

HEROMOTCORP LIMITED **[Aug-2021]–[Present]**
Research and Development Engineer

I joined Hero motors as a PGET (Post Graduate Engineer Trainee). Being my first Automotive company, it taught me industry cultures as well as standards it follows.
The technical experience I gained here are:

- Side-stand Functionality development
- CAN communication establishment between multiple ECUs
- Tools: INCA, CANalyzer, CANoe
- Embedded coding in C, C++, Python
- GUI Creation for DTC management for HERO
- 2F Service Implementation (ISO 14229) on BSW
- Motor Controller Functionality, VCU, BMS (Currently Working)

HERO PROJECTS

- **Side Stand Functionality:** On FI- ECU, Simulink model creation of side stand functionality which includes side stand sensor as well as indicator functions using SIMULINK MODEL. The diagnostic function is also developed by me.

- **GUI development for diagnostic ID management:** Created a GUI using Python to update xml files for DIDs detail including encryption key for different ECUs (VCU, BMS, MCU, TCU etc) of Electric Vehicle.

- **VCU and BMS Project:** Implemented basic functions like Analog Input/Output, Digital Input/Output, CAN communication on Starter Kit of NXP, Renesas Microcontroller with embedded C coding as well as Simulink Model based coding.

- **UDS Function 2F Functionality Implementation:** Accordance of ISO 14229, the 2F functionality of directly controlling different Actuators like Fuel Pump, Injector, Ignition coil, MIL indicator, Side stand Indicator, I3S Indicator etc. on BSW level.

CERTIFICATES

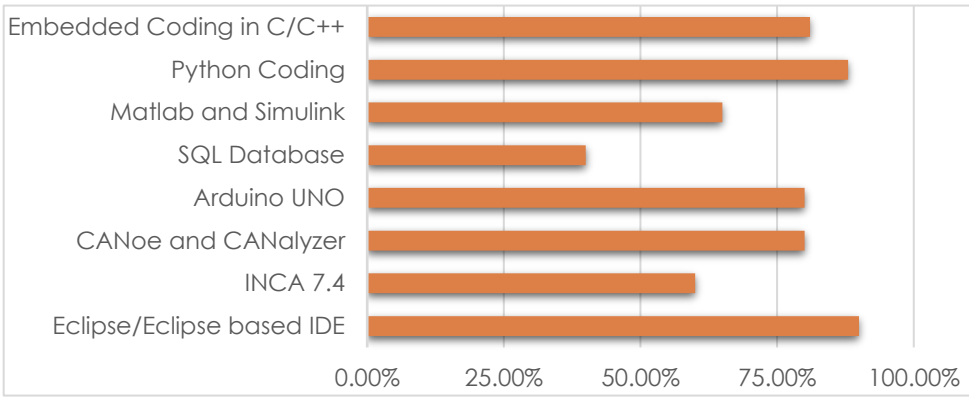
- ISO 26262-Functional Safety (OMNEX)
- High Voltage EV L2 Certificate (TUV SUD)
- Python with Data Science (THEAX)
- Certificate of Appreciation (NUCLEUS SOFTWARE EXPORT LIMITED)

- **Functional Testing:** Different functions like Bank angle sensor and Switch inputs (Start Switch, Neutral Switch, Clutch Switch, I3S Switch) are tested on Vehicle level.

NUCLEUS SOFTWARE EXPORT LIMITED **[Jul-2015]–[Apr-2017]**
Software Test Engineer

I worked as a Manual Test Engineer where I gained Professional communication skills and work ethics. I also got multiple recognitions for my contributions.

SKILLS



EDUCATION

Indian Institute of Technology, Bombay **[Jul-2019]–[Jul-2021]**
Master of Technology | Control and Computing – Electrical Engineer

Sardar Vallabhbhai National Institute of Tech, Surat [Jun-2011]–[Jun-2015]
Bachelor of Technology | Electronics and Communication Engineer

IITB PROJECTS

- **Development of a freeware-based platform for computational Electromagnetics:** Analyzed different Python GUIs (graphical user interface) like Kivy, PyQT and Tkinter

- **Position Control of DC Motor:** Implemented a PID feedback controller for controlling the position of DC Motor using Arduino Mega.

- **Hand and gesture (sign language)-to-speech using skin masking:** Achieved 100 % accuracy with live detection on 2 datasets on American Sign Language as well as Indian Sign language constructing CNN network for 26 digits and 9 numbers.

  Analog Active Noise Cancelling Headphones: Analyzed the stability of headphone-microphone system by making it's bode plot and achieved active noise cancellation by designing and incorporating a Lag compensator to nullify external noise.