Resume

VIVEK HIRENBHAI PANDYA
Embedded & Power Electronics Engineer

📍 A/9 GREENPARK SOCIETY, NR PRIME ARCADE, ADAJAN, SURAT, GUJARAT, INDIA - 395009
📱 +918980952189
✉ vivekhpandya@yahoo.co.in   🌐 vivekhpandya.wordpress.com   in linkedin.com/in/vivekhpandya
Sex Male | **Date of birth** 9 Feb 1995 | **Nationality** Indian | **Current Location** Ahmedabad

CAREER OBJECTIVE

To be an astute learner to work in creative environment, which incessantly grows my technical abilities. Working towards the energy efficiency and quality enhancing sustainable smart solutions is my technical ambition.

EXPERIENCE

Feb 2018 – Present (10 months - **Lead Electronics Engineer**)	**Mach Motors:** ➤ Designing a brain for electric motorcycle to deliver power, high-performance, energy efficiency and smart user interaction. Designing products from scratch and managing product development-cycles. Having proper understanding of vehicle electronics & architecture. ➤ Monitoring PCB designing. Handling vendor development. Managing talent acquisition for electronics team.
Aug 2016 – Feb 2018: (1 year 6 months - **R&D Engineer**)	**National-InfoTech:** ➤ Worked on ARM Cortex (with rigorous experience on STM32, Nuvoton, TI), Embedded Linux, Wireless Communications, CAN protocol, RTOS and Power Electronics development & testing (BLDC, SMPS, Converters)
June 2016-Aug 2016: (3 months - Internship)	**R S Automation:** ➤ Got an exposure of PLC ladder programming, VFDs, Modbus & Ethernet communication, HMI designing, SCADA and industrial IoT.

PROJECTS

Mach Motors:	**-** Designed **BMS** from scratch. **-** Working on **BMS**, **Charger**, **VCU** and **Dashboard** and scope is about designing/integrating them with entire vehicle electronics majorly using **CANOpen** or **CAN**. Proficient in BMS and Charger electronics architecture and control. (NDA)
National-InfoTech:	**-** **Battery Chargers** for industrial purpose and EVs. Developed different control techniques for Trickle, Float/Boost, CV/CC with more than 30 user parameters on Nuvoton M051/M453. Provided reverse polarity detection and protection circuit. **-** **Solar String Monitoring** box communicating over **SunSpec modBus** for centralized logging **-** **Temperature Scanner** compatible for Thermocouple or ratio-matric RTD with stacking options for more channels **-** **Accesscontrol** a complete solution on STM32 & Raspberrypi with Bluetooth/RFID /Fingerprint **-** **CAN** based RFID locker house secure locking system **-** **Office Automation** system with CII over MQTT and Bluetooth
Other Projects:	**Vehicle Anti-Theft, Docking station with lock system & charging, Predictable metering, 9 level inverter, SPWM, SVM, RF based industrial IOT**
Final Year Project:	**Total Harmonic Distortion Measurement & Data Logging** based on FFT, on PCC
MHRD Sponsored Project:	**eYRC-IIT-Bombay: Automation in Recyclable Waste Management**

EDUCATION

June 2012–June 2016:	Bachelor of Electrical Engineering - Gujarat Technological University (SCET, Surat) **Cumulative Percentage Index (CPI) – 7.66** (Top 5%)
May 2012:	Higher Secondary School - **Percentage: 84.77%** (Top 1%)
April 2010:	Secondary School - **Percentage: 89.38%** (Top 2.44%)

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TRAINING AND INDUSTRIAL EXPOSER

1 Jun 2015–29 Jun 2015:	Vocational Training: **Reliance Industries Limited**, Hazira, Surat **Areas of Study**: Controllers & drives, Salmoiraghi automation, Sub Stations, MCC, Transformers, Relays & Safety Training.
1 July 2015-25 Jan 2016:	Completed course on **Silicon-lab advanced 8-bit microcontroller**

SKILLS

Programming:
C, C++, HAL, RTOS, Python, Ladder logic, Html, Beginner in JavaScript (for POC)

Communication Protocols:
UART/MODBUS, CAN, SPI/isoSPI, I2C, Bluetooth, GSM, TCP/IP, MQTT, NFC, SDIO
Learning: OTA updates at embedded level, CANOpen

Simulation and Development:
Keil/TrueStudio/Eclipse/Si-lab/Arduino IDE, Eagle/Altium CAD development, STM32CubeMX, mBed, MATLAB, Proteus, svn/git, SBC OS (raspbian, debian, ubuntu)

Other:
Hardware Design & Debugging, FATFs, SQlite, JSON, Electric Powertrain, Motor Controller, AWS for embedded systems
Learning: Data Science, Machine Learning

Soft Skills: Leadership, Team Management, Information handling

ACHIEVEMENTS

➢ Secured **2nd** position in **Industrial Project Review** for final year project - 2016
➢ Awarded **Dhirubhai Ambani Foundation Undergraduate Scholarship** for outstanding performance in Higher Secondary School
➢ Selected for **Inspire Internship – 2010**, Department of Science and Technology, New Delhi
➢ Secured **1st rank** – **GTU Techfest** - Model Extempore

Extra and Co-curricular Activities

➢ **AIESEC** in Surat work experience as **TL and TM** (Feb 2013 to Dec 2014 – OGCDP & CIM)
➢ **Media chair person** in URJA-2014
➢ Volunteering for **National Youth Conclave** 2015
➢ Actively participated in the **E - Summit 2015 (IIT-Bombay)**
➢ Secured **2nd rank**-**National Art Centre** Poem Writing 2014 & written and back staged drama

LANGUAGES

➢ **Gujarati** (Mother Tongue), **English** (Read, Write, Speak), **Hindi** (Read, Write, Speak)

HOBBIES

➢ Travelling
➢ Troubleshooting/Repairing
➢ Reading/Writing