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# EDUCATION

**Master of Science in Internet of Things**

University of Huddersfield, Huddersfield, UK

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2022 – present

Grade : --

# Bachelor of Technology in Electronics and Communication Engineering

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Dharmsinh Desai University, India 2017 - 2021



Grade : 2:1

# FIELDS OF INTEREST

Internet of Things (IoT), Embedded Systems, High performance computing (HPC), Cloud computing, Mathematics, Product designing

# TECHNICAL SKILLS

**Programming Languages:** C/C++ (4+ Years), Python (Competent), Microsoft Azure, AWS(Competent.)

**OS:** Windows, CentOS, Linux

**Tools:** GIT, Verilog, CIW, Proteus, Keil, EasyEDA, Microsoft Azure, AWS(basics), Mbed

# STRENGTHS

Creative and Innovative, Team Player, Fast Learner, Self-Motivated and highly Adaptive, Leadership/Mentor-ship, Great Problem Solving

Communication (Presentation, Teaching, Confidence, Empathy, Active Listening, Written and Speaking)

# LANGUAGE SKILLS

International English Language Testing System (IELTS) : 7 Band

**PROJECTS**

**Design and development of IoT based smart home heater** *( Guide: Prof. Wencheng Pan, May 2022 )*

***Objective*** : To design a IoT based smart heater for home to find current room temperature and display it locally as well as on website and can be controlled through webpage, voice command and manually.

*◦*

***Tech. and Tools Used:*** Python, C/C++, Google Assistant SDK, Arduino IDE, NodeMCU v1.0, Relays,

*◦*

Microphone, Speaker, Temperature sensor (TMP36), 3D printed plastic covering

Implemented complete prototype of heater that can controlled through internet, controlled by using webpage or manually. Gives current room temperature value and can be turned on/off at pre-defined temperature.

*◦*

Leveraged Google Assistant SDK with IFTTT to give instruction of turn on/off

*◦*

Implemented prototype using ESP8266, which communicates through WiFi protocol with server, Designed PCB with proteus and printed outer covering with 3D printer

*◦*

* ***Videos and Report:*** [Project Report](https://drive.google.com/drive/folders/1IVlzyfnmD66U0nr8EDrxtw4emTXnqgY3?usp=sharing)

**Noiseless vehicle horn system** *( Guide: Dr. M. Limachia , April 2019 )*

***Objective***: To make a vehicle horn that buzz inside the vehicle using internal vehicle speaker and developed indicator to show direction of alerting vehicle without using any software

*◦*

***Tech. and Components Used:*** 555 Timer, Modified ultrasonic transmitter, RF transmitter and receiver of 433khz, HT12 decoder and encoder IC, Power supply

*◦*

Designed a vehicle horn without using any software that can alert driver by creating buzz effect inside vehicle to reduce noise pollution created by vehicle horn

*◦*

*Designed end to end c*onnection hardware using logical array ICs that initiate communication between vehicles.

*◦*

*◦*

***Further References:*** [Presentation](https://docs.google.com/presentation/d/1cB3cm1-m2d09o1euSbjKMujgkJ4Be6Cd/edit#slide=id.p9)

**IoT based Home automation** *( Guide: Prof M. K. Patel , December 2018 )*

***Objective***: To develop complete home automation system using Node MCU by which user can control switches and monitor CO2 level, temperature and humidity live from smartphone and can give command through voice assistant.

*◦*

***Tech. and Components Used:*** Python, C/C++, Adafruit IO, ESP 8266, CO2 sensor, DHT12 sensor

*◦*

***Further References:*** [Presentation](https://docs.google.com/presentation/d/1cB3cm1-m2d09o1euSbjKMujgkJ4Be6Cd/edit#slide=id.p9)

*◦*

# EXPERIENCE

**McDonald’s Restaurants Limited ** Huddersfield, West-Yorkshire *(January 2022 – Present)*

**Crew Member, Part-time**

* Providing excellent customer experience
* Sales planning
* Store keeping

**Larsen & Toubro Limited ** Surat, GJ *(December 2020 – May 2021)*

**Industrial Trainee, Electronics engineer**

* Pursued summer internship to better the accuracy by utilizing
* Carried out the maintenance procedure of IT devices of on-shore/off-shore oil and gas refineries
* Developed IOT based welding machine tracking system to monitor the working times and location of machines in 10km radius using LoRaWAN network technology

**Aditya Industech Private Limited ** Surat, GJ *(March 2020 – December 2020)*

**Project Intern**

* Learned about PLC programming
* Worked on PLC based electrical control panel of heavy duty Air-jet weaving machines

# VOLUNTEERING ACTIVITIES

**Code Life Ventilator Challenge** (Consultant Engineer) *(Team: Adhoc Inventors , May 2020)*

* Designed a system to help report pressure, airflow, and humidity by using Arduino Nano
* Leveraged Python to receives and better analyze the data from pressure/humidity sensor on raspberry pi
* Had an amazing experience working with intelligent people of "Adhoc Inventors" from all over the world
* Learned a lot about ventilator, and especially the precision & accuracy required in medical devices
* ***Further References:*** [Certification](https://drive.google.com/file/d/1MxBDiPzSPuqbtKf8Uk2kljG671_GKk1a/view?usp=sharing) | [Working Demo by Team Leader](https://youtu.be/krwyBAVh5UU)

**Workshop on PIC controller** (Teacher) *(IEEE Student Branch, January 2019)*

***Objective***: To instruct students on practical embedded systems

*◦*

***Tools Used***: MPLAB, Proteus, PIC16F877A Development Board

*◦*

Taught junior students the basic embedded C programming structure, pic controller architecture, and to efficiently read data-sheet of any microcontroller

*◦*

Taught and presented the working of GPIO, ADC, SPI peripherals in PIC16f877a’s dev board

*◦*

Students wrote the code for ADC and Seven-Segment display independently, simulated it using the Proteus tool, and finally burned the hex into the PIC16F877A development kit to observe the output

*◦*

* ***Further References :*** [Student Feedback form](https://drive.google.com/file/d/1cqseLdot9tz-C9HBkB5ty_HuxMEfSgi3/view?usp=sharing) | [Snapshots](https://drive.google.com/drive/folders/1d9GyHJMfLDQEio_vYMw4D6AuboJV7PaZ?usp=sharing)

# LANGUAGE SKILLS

International English Language Testing System (IELTS) : 7 Band

# HOBBIES

Teaching, Basketball, Reading Novels (Favorite- The Name of the wind), Music (Favorite: Melodic Dubstep)