- **NAME:** MOHAMMED ABDUL IMRAN AFREED
- **COLLEGE:** INDIAN INSTITUTE OF TECHNOLOGY, BOMBAY
- **DEPARTMENT:** ELECTRICAL ENGINEERING, 2^{nd} YEAR.

Scholastic Achievements

- Secured **All India Rank 66** in **JEE (Main) Paper 1** out of 1.2 million candidates *(2018)*
- Secured **All India Rank 234** in **JEE (Advanced)** out of 224,000 candidates *(2018)*
- Secured **Rank 16** in **Andhra Pradesh State EAMCET** out of 122,000 candidates *(2018)*

Scholastic Achievements

- Eligible for **Indian National Chemistry Olympiad(INChO)** conducted by HBCSE *(2018)*
- Recipient of **KVPY Fellowship** by Department of Science and Technology, Govt. of India *(2016)*
- Secured **Rank 17A** in National Mathematics Talent Contest conducted by **AMTI** *(2014)*

Projects and Technical Activities

Home Automation Project | ITSP : *(Nov-Dec 2019)*
Institute Technical Council

- Made an **Autonomous robot** which serves as a **delivery robot** in a given area, in a team of four
- Designed the circuit and a **Printed Circuit Board** for the robot in **Eagle**
- Built an **Android App** which communicates with robot via **wifi** to communicate the destination point.

Electrical Trainee | IITB Racing *(April -Aug 2019)*
A cross functional team of 70+ students from seven engineering discipline which designs and fabricates an **electric race car** for Formula Student competition held annually at **Silverstone,UK.**

- Tested the **Hall effect proximity sensor** and **Position Sensor** used it to find rpm of a rotating gear
- Completed a module on **Controller Area Network (CAN)** and **Data Acquisition (DAQ)**

Digital Electronics Project | DC Motor Speed Controller *(Spring 2019)*
Course Project | Guide:Prof.M.B.Patil

- Designed a sixteen-level Open-loop DC Motor Speed Controller regulated via four-bit Dip switch
- Implemented the logic using Binary Down-Counters, 555 timer, AND, OR and XOR Gate
- Got exposed to EAGLE Software and learnt to deploy Integrated Circuits in execution of logic

Network Theory Project | IITB Power Distribtution *(Autumn 2019)*
Course Project | Guide:Prof.V.M.Gadre

- **Explored** the IITB Power distribution system spread across 550 acres with **14 substations**
- **Presented** this work to students of various colleges as a part of Immersive Pedagogogy workshop under the KITE initiative of the MHRD,Govt. of India

Bluetooth Controlled Car | XLR8 Competition *(Aug 2019)*
Aeromodelling Club | IIT Bombay

- Worked in a 4-membered team, **built** a wireless remote-controlled car with **differential steering mechanism**
- Used **Bluetooth module(HC-05)** for wireless controlling, Learnt circuit design on solder breadboards

Position of Responsibilities

Technical Counselor | Hostel-XVI *(Sep 2018- May 2019)*

Elected by1000+ students to lead a team of three secretaries

- Proposed and took the **Initiative** of successfully establishing a **Tech room** for the first time in the hostel
- **Organised** a Gaming night with various e-sports tournaments for **2000+ students**
- **Organised** the gaming part of SOLSIDE (hostel fest of XV, XVI), got the equipment **sponsored** for a day

Junior Design Engineer | IITB Racing *(Aug 2019-Present)*

Controller Area Network(CAN) and Data Acquisition(DAQ) subsystem

- **Designed** CAN node with a Instrumentational Amplifier INA122 using AtMega 16M1
- **Tested** the CAN communication using Micro-controller Teensy 3.2 and SN65HVD230/1
- **Designed** the peripheral circuitry of the CAN transceiver SN65HVD230/1 on Eagle
- Working on **Integration of AtMega 16M1** in CAN communication in place of Teensy 3.2
- **Tested** the **wireless communication** using XBEE and LoRa sx1278 radio frequency modules

Logistics and Operations Coordinator | Mood Indigo *(July 2019 - Dec 2019)*

Asia's largest College Cultural festival, footfall of 143,000+, 230+ events

- Involved in the Ideation, Planning, and execution of Logistics, securities, and Operations of all the pre-fest events being held by MoodIndigo involving a crowd flow of 300+ college students
- Management of crowd of 2000+ with the successful smooth functioning of Pre screening event in Convocation hall
- Made a map and managed Logistics of a newly added venue for four days in MI

Operations Coordinator | E-Cell,IIT Bombay *(Sep 2018- May 2019)*

Recognised as India's largest Enterpreneurship promoting student body by NEN

- Contacted vendors regarding sofa, matress etc and transportation of goods required during **E-Summit**
- Mentored three teams in a **business idea competition** conducted for freshmen(**EnB Buzz)**

Technical Skills

- **Programming:** C++, MATLAB, Arduino
- **Languages:** HTML, CSS, LaTeX
- **Software:** Microsoft Office, Eagle, AutoCAD, SolidWorks

Extracurricular Activities

- Attended **Annual Training Camp(ATC)** and **Captains Training Camp(CTC)**, involved in many activities like rifle firing, Obstacle Training, Weapon Training, Map reading, drill etc. *(Dec 2018)*
- Participated in **Guard of Honor on Republic day**, 26th January,2019 at IIT Bombay *(Jan 2019)*
- **Mentored** a team in RC car making competition(XLR8) **ranked 6th** among 164 other teams *(2019)*
- Volunteered in diamond jubilee year convocation function of IIT Bombay *(2018)*
- Visited **Hiware Bazar**- A model village known for irrigation system, water conservation program, to know how local governments and NGOs work in a drought condition, as a part of GRA,IIT Bombay *(2018)*
- Volunteered in **Versova Beach cleaning campaign** recognised as the largest Beach cleanup campaign by **United Nations**, as a part of Abdhudaya,IIT Bombay *(2018)*
- Volenteered in Half Marathon, which witnessed over 4000 participants *(2018)*
- Covered the entire Annual Training Camp(ATC) album with a co photographer *(2018)*
- Attended the **Vijyoshi Science Camp** organized by the **Indian Institue of Science(IISc)** *(2016)*

Relevant Courses Undertaken

- **Electrical Engineering :** Electronic Devices and Circuits, Network Theory, Machines and Digital Electronics,Analog Circuits*, Signals and Systems*, Electrical Machines and Power Electronics*, Digital Systems*, Network Security*
- **Mathematics :** Calculus, Linear Algebra, Ordinary Differential Equations, Partial Differential Equations,Complex Analysis
- **Computer Science :** Computer Programming and Utilization
- **Physics :** Quantum Physics and its Applications, Basics of Electricity and Magnetism

** courses to be completed by April 2020*