

Sudhir Kumar Suman

🌐 MyHomepage

✉ sudhirkr@iitb.ac.in

🐙 Github

☎ (+91) 9113345945

in LinkedIn

EDUCATION

- Pursuing **Dual(Btech+Mtech)** in **Electrical Engineering** from **IIT Bombay** Expected 2021
- Key Courses Undertaken: Digital Image Processing, Computer Programming and Utilization, Probability and Random Processes, Linear Algebra, Calculus, Data Analysis and Interpretation, Microprocessor, Communication System, Digital System

SCHOLASTIC ACHIEVEMENT

- Secured a rank in top 1.2% in JEE Advance having 0.2 million candidates 2016
- Secured a rank in top 2% in JEE Mains having over 1.2 million candidates 2016
- Brought 1st prize to school in Inter School General Science Competition 2011
- Won the 1st place in Intra School English Elocution competition 2012

PROJECTS UNDERTAKEN

- **D.C. motor speed control:** March'17
Course Project | Guide: Prof.M.B.Patil
 - Designed a circuit to effectively control the of DC Motor using dip switches without using microcontroller
 - Developed the circuit using Preset Counter, J-K Flip Flops, Logic Gates and took input through Dip Switch
 - Implemented Pulse Width Modulation (PMW) by using digital integrated circuits only
- **Satellite Image Receiving:** Sept'17
Hobby Project | Guide: STAB
 - Build our own double cross antenna to receive satellite signals
 - Decoded the image of NOAA satellite by using RTL-SDR dongle and double crossed antenna
- **Reaction Game:** April'18
Course Project | Guide: M.P.Desai
 - Programmed the Altera's MAX V CPLD board to calculate the reaction time of the player in milliseconds and display it on a 16x2 LCD display over a period of eight iterations
 - Wrote VHDL programs in Quartus to make an led blink at a random time. The player has to press a button as soon as possible while the CPLD computes the reaction time of the player
- **1D Motion Stage:** April'18
Course Project | Guide: Prof.Siddharth Tallur
 - Designed the circuit to control the bi-directional motion of the DC motor, controlled by the rotation of potentiometer knob
 - Simulated the circuit in NgSPICE to test various values of resistors and capacitors
 - Used opamps as integrator, differentiator and schmitt trigger to create PWM pulse and later feed that pulse to L293D to run the motor in both direction,
- **Stock Market Clustering:** June'18
Online Project | Guide: Eduonix-Tech
 - Imported some past stock data from the Yahoo Finance and then train K-means clustering algorithm to detect similar companies based on stock market movement
 - Used Jupyter notebook to develop a python application that can find similarity among companies that might not ordinarily be discovered

TECHNICAL SKILLS

- **Languages:** C++, VHDL, JavaScript, Python, CSS, HTML

- **Tools:** DSO,CRO,Function Generator
- **Software:**MATLAB,Quartus,ngSPICE,Octave, AutoCAD, SolidWorks

ONLINE COURSES

- **Introduction to Data Science in Python:** June'18
Coursera | University of Michigan
 - Developed skill to manipulate and clean data using pandas data science library,learned how and run basic inferential statistical analyses on tabular data
- **Front End Web Development:** March'18
Udacity | Google India Challenge Scholarship
 - Learned the building blocks of the web -HTML and CSS,developed skills of effectively creating the structure of a website using semantic HTML Then styling a website with CSS
 - Developed skills for creating the structure of a website using semantic HTML then styling a it with CSS,later JavaScript and Document Object Model (DOM) for controlling page content and interactions

POSITION OF RESPONSIBILITY

- **Organizer of Techfest:** 2016
 - Participated in CURED as an organizer ,a camp to cure diabetes,
 - Witnessed more than 60,000 free diabetes by setting up 178 camp all over India
 - Responsible for smooth execution of event, ensured enforcement of event rules and regulations
- **Coordinator of Techfest:** 2017
Asia's largest college technical festival
 - Materialised the social initiative SHE(menstrual health awareness campaign organizing seminars and distributing sanitary pads in 50+ villages) and Nirbhaya(self defense and mental training workshops for women)
 - Cooperated with coordinators in formulating Ozone-games, street events ,whacky competitions and workshops
 - Contributed in ideation of all the ambiance for the fest
 - Negotiated and interacted with over 30 international and national artist for ambiance
- **School Pupil Leader:** 2012-13
Highest post of leadership at school level
 - Elected by the student to represent the student body of school
 - Worked with head of school to plan school wide events
 - Collaborated with class monitor to develop activities and leadership among students
 - Promoted further student leadership within the school

KEY COURSES UNDERTAKEN

- **Electrical:**Microprocessors*,Electromagnetic waves*, Communication systems*,Electronic Devices, Network Theory,Analog Circuits,Digital System
- **Additional:** Digital Image Processing*,Computer Programming and Utilization,, Probability and Random Processes*, Linear Algebra, Calculus, Basics of Electricity and Magnetism, Quantum Physics and Application,Data Analysis and Interpretation

EXTRA CURRICULAR ACTIVITIES

- **Sports:**
 - Played the final of cricket tournament in Annual Sports Meet held at School 2014
 - Finished among top 3 in Relay Race competition in Annual Sports Meet held at School 2014
- **Culturals:**
 - Won the 2nd place in singing at school level singing competition 2012
- **Social Activities:**
 - Successfully completed a one year course under the National Service Scheme(NSS) IIT Bombay ,involving ideation and implementation of solutions to social problems 2016-17
 - Volunteered for several social campaigns like Cashless Economy, Reuse used material, etc conducted by NSS 2016
 - Volunteered in several schools to teach students about sustainable energy and its benefits 2016

*to be completed by November'18