SCHOLASTIC ACHIEVEMENTS

- Achieved **All India Rank of 510** among **1,60,000 candidates** in JEE Advanced 2017 *[2017]*
- Secured **99.75** percentile in JEE Main 2017 among **1.2 million candidates** *[2017]*
- Awarded the **Scholarship for Higher Education** under **INSPIRE** for being in **top 1%** of CISCE board *[2016]*
- Recipient of the prestigious **Kishore Vaigyanik Protsahan Yojana** (KVPY) **fellowship** (SA stream) conducted by the Indian Institute of Science(IISc) securing a 98.87% percentile *[2014*
- Secured admission to the **Indian Statistical Institute** B.Math after clearing two written tests and one interview round, extended only to 35 students in the general category *[]2016]*
- Attended the **Vijyoshi camp** at IISER Kolkata organized by IISc Bangalore *[2015]*
- Qualified stage 1 **National Talent Search Examination** conducted by the Government of India. *[2012]*
- Obtained **first** position out of **4000 students** in inter campus class tenth comparative examinations for ICSE boards conducted by the school.
- Pursuing a **Minor** degree in **Computer Science and Engineering** *[Present]*

KEY PROJECTS

INSTITUTE TECHNICAL SUMMER PROJECT (EmoTV) *[Summer 2108]*

Project under Web and Coding Club

- Implemented speech to text operation on python using the OpenCV library and Google API with a regular mic as an input audio source for storing the speech as a string variable
- Implemented speech to text operation on python using the OpenCV library and 'gtts' API to read a string and create plus play the corresponding mp3 file for it
- Developed a Visual Studio app for the Microsoft Kinect sensor to track skeletal movements and give a simple GUI response to certain joint movements. Integrated the app with kinect speech library to record ausio as well
- Utilized Keras API to classify human expressions of the test dataset into 'happy' and 'sad', achieving a 60% accuracy after training from a sample dataset and then responding accordingly by playing music or printing a message using OpenCV and python libraries

SUMMER OF SCIENCE (MACHINE LEARNING) *[Summer 2018]*

Project under Maths and Physics club

- Studied the fundamentals of supervised and unsupervised Machine Learning along with certain related concepts on statistics (like risk minimization in Bias Variance trade-off) and documented all of this in a report
- Understood Principal Component Analysis (feature extraction technique) and classification algorithms like Adaboost, Perceptron and Decision Trees

SUMMER OF CODE (FAQ BOT) *[Summer 2018]*

Project under Web and Coding Club

- Compiled a vast list of intents and entities on IBM Watson Assistant to mimic the interface of the desired chatbot
- Implemented a chat interface and incorporated it with Flask-WTF extension to serve it and create a frontend that will take the user query from the webpage textbox and send it as a string to the NLU engine
- Performed web scraping using the library 'Beautiful Soup' to parse data from HTML, integrated the front end with the back end and incorporated the NLU engine to run the bot on localhost

PONG GAME *[December 2017]*

Personal Initiative

- Created an interactive pong/air-hockey game in Python on CodeSkulptor using library 'simplegui' and event handlers for mouse clicks, key presses and keyboard inputs.
- The project involved writing codes for collisions and reflections of the ball from the boundaries and the paddles, velocity control for the paddles and the ball, developing a suitable canvas and gui, score keeping and randomizing the ball's motion at the start of each round.

DISPLAYING A SMILEY ON 8*8 LED MATRIX *[April 2018]*

Course project under Prof. Subhananda Chakrabarti

- Implemented a high frequency clock using timer 555 IC in astable mode to feed a modulo 8 counter
- Constructed a circuit using basic logic gates to evaluate boolean expressions corresponding to the LED row positions that would light up
- Used a 3 to 8 decoder taking input from the modulo 8 counter to trigger LEDs in each column successively, to finally create a smiley pattern on the matrix.

OBSTACLE AVOIDER ROBOT *[April 2015]*

Personal Initiative

- Attached IR sensors on both sides and UV sensor on the front side of the robot chasis for proximity and distance sensing implemented on Arduino UNO microcontroller
- Implemented codes on Arduino to control the DC motor rotation(for turning away) when an obstacle came close
- Implemented remote control for varying the motor speed or turning it off, using IR Receiver Module

KEY COURSES UNDERTAKEN

Electrical Engineering	Introduction to Electrical Systems, Introduction to Electronics, Electronic Devices and Circuits*, Network Theory*, Electronic Devices Lab*, A First Course in Optimization*
Computer Science Engineering	Computer Programming and Utilization, Data Structures and Algorithms*
Mathematics and Statistics	Calculus, Linear Algebra, Differential Equations-I, Differential Equations-II*, Complex Analysis, Data Analysis and Interpretation*

*To be completed by Dec '18

TECHNICAL SKILLS

- **Programming Languages/Libraries and IDEs**: C/C++, Java, Python, HTML, OpenCV, Arduino, Flask
- **Software**: AutoCAD, Solid Works, MATLAB/Octave, Latex, GNUPlot, XCircuit, NGSpice, Audacity, Visual Studio, Microsoft Office Tools

INTERESTS

Machine Learning, Image Processing, Algorithms and Data Structures, Convex Optimization, Semiconductor Physics, Quantum Physics, Linear Algebra, Network Theory

POSITION OF RESPONSIBILITY

Coordinator | Media and Public Relations | Student Alumni Relations Cell (SARC) *[Present]*

- Cordially interacted and updated database with 18 parameters for over **600 alumni**, helped organize the telephonic marathon event **Phonathon**, that witnessed a 1.1% and 200% rise in volunteer and alumni participation respectively
- Responsible for co-authoring the institute monthly newsletter **'The Knowledge Tree'** published by the Dean-ACR office that has a readership reach of **over 50,000** alumni
- Prepared the website content for the SARC flagship event **'Alumination'** attended by 200+ alumni and 1000+ students
- Authored multiple articles for **'SARC Blog'** showcasing the inspirational accomplishments of various alumni
- Constructed interview questionnaires for the initiative **'Know Your Alumni'** directed at revealing the motivational life experiences and viewpoints of the alumni

EXTRA-CURRICULAR ACTIVITIES

- Dedicated **over 80 hours** for community service under **National Service Scheme(NSS)** which involved recording and editing (using Audacity) audio-books of novels, hence providing access of literature to the blind and the illiterate
- Participated for **squash** in the in-semester camp **Prarambh** organized by the Sports Council of IIT Bombay.
- Bagged the **first** team position in **'Physics Bazinga'** competition organized by the Maths and Physics Club, IIT Bombay
- Participated and directed a short film for the event **'Freshiezza'** organized by the Silver Screen and IIT-BBC.
- Stood **first in Kanpur zone** in Techkriti Open School Championship (TOSC-round 1) organised by IIT Kanpur