

# Sachin Chandani

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## Technical Skills

### Proficient In

- > C/C++
- > HTML, CSS
- > MATLAB
- > UNIX/GNU
- > VLSI Designs
- > C(embedded), Micro-controllers

### Libraries/Framework

- > Javascript
- > Mysql
- > Bootstrap

### DevOps

- > Git

## Courses

### Computer Science

- > Data Structures
- > IT Workshop
- > Computer System Organization
- > Discrete Mathematics

### Electronics

- > Digital Logic and Processors
- > Embedded Hardware Designs
- > Electrical Science I & II
- > Linear Electronic Circuits
- > Electronic Workshop I & II
- > Digital Signal Processing

### Miscellaneous

- > Engineering Systems
- > Human Sciences
- > Science I

## Interests

- > Competitive Programming
- > Reading, Fiction
- > TV/Web Series

## Education

**Bachelors of Technology in Electronics and Communication**  
*International Institute of Information Technology, Hyderabad*

July 2016 - Present

**Intermediate (RBSE 84%)**  
*Noble School, Pali*

July 2013 - April 2015

**High School (RBSE 88%)**  
*Emmanuel Mission School*

## Projects

### Shape Plotting of The Objects

C(embedded) Arduino MATLAB Circuit Design

Developed a prototype of Shape Detecting System which can plot 3 dimensional image of object kept in front of it. The majors of this project were embedded C, micro-controllers and system optimization techniques.

### Heart Rate Monitoring using PPG Signal

MATLAB Python Shell

Uses PPG, ECG and Acceleration Signals to monitor Heart Rate using techniques like Signal Decomposition, Spectrum Peak Tracking and Sparse Signal Reconstruction.

### Variations Resistant Sizing in MOSFET Transistors

Artificial Intelligence C++ Python MATLAB

Project based on Swarm Intelligence/Ant Colony Optimization which performs AI based transistor sizing on digital circuits. The leakage of 45nm MGK full adder was reduced to 50% during testing.

### Bombberman Terminal Game

Python

A UNIX terminal game based on original BOMBERMAN. The game is purely developed with python and can be played with different levels with greater difficulties.

### Obstacle Avoiding Bot Prototype

Arduino Circuit Design

Developed a dynamic bot prototype which can detect obstacle and change its path as per the requirements. The bot can be operated with or without using micro-controller.

### Audio Amplifier

Circuit Design

Developed an audio amplifier circuit consisting of pre-amplification, gain and filter stages. The amplifier was rated 8.5/10 for the qualitative test.

### Other Minor Projects

C++ Artificial Intelligence

- **Tic-Tac-Toe Bot** : An AI based unbeatable 3 x 3 Tic-Tac-Toe bot which min-max algorithm to ensure the fastest victory.

## Positions of Responsibility

- **Apex Member, IIIT Hyderabad** : A selected body consisting of 14 members and responsible for organizing the induction events for fresher's and coordinating student mentors.
- **Coordinator, Campus Life Committee, IIIT Hyderabad** : A committee responsible for organizing all the events related to campus life of institute.
- **Core Team Member, Felicity IIIT Hyderabad** : The techno-cultural fest of IIIT Hyderabad with a footfall of 4000-5000 people.
- **Member, Felicity Buzz Codecraft'17** : Successfully curated and tested problems in Buzz'17 Codecraft-an annual programming competition by IIIT Hyderabad.
- **Logistics Representative, VAYU House, IIIT Hyderabad.**