# SYED AFSHAN

Undergraduate · Specialization in Electrical Engineering
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## Education

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|---|---|---|
| 2013-2017 | **B.Tech**, Indian Institute of Technology, Jodhpur | *8.17/10* |
| 2012 | **Central Board of Secondary Education**, Jaipur School | *84 %* |
| 2010 | **Central Board of Secondary Education**, S.H.R.S Public School, Jaipur | *9.2/10* |

## Projects

### Fast Fourier Transform Radix Method

*Prof. Sandeep Kumar*

Course project, Digital Signal and Processing — *Current Project*

- Implementing DFT, Radix-4, Radix-2 and Split-Radix FFT Algorithms on a Web-App.
- Calculating the run time complexity of all above algorithms and suggesting user the Best(fastest) Algorithm for his application.
- Favourable platforms for the implementation of the project include HTML, Bootstrap, Javascript, Plotly.

### Load-Flow Study on a Power System

*Prof. Abdul Gafoor Shaik*

Course project, Power System — *March. 2015 - April. 2015*

- Used MATLAB Power System Toolbox software to simulate and study the effects of generator rescheduling, series and shunt compensation and system load on IEEE 14 bus power system Solution of Load Flow Problem.
- Compared the convergence and running time of various algorithms used to solve Load flow problems.
- Successfully simulated the results and developed a program to improve the convergence of the algorithm.

### Karnaugh Map Solver

*Dr. Anil Kumar Tiwari*

Course project, Digital Logic and Design — *Jan. 2015*

- Implemented a fully functional Online Kmap solver, simplifying algebraic expressions (upto 8 variables)
- The app is able to simplify the logic in form of min-term expression keeping logic same and reducing number of gates that will be employed by the user for any hardware project.
- Implemented entirely in Javascript and Bootstrap

### Autonomous RF Car

Self Project — *June. 2014 - July. 2014*

- A python implementation of neural network algorithm of machine learning, training a RF car with attached camera to drive by itself.
- Images taken by car were sent from car to processor via server, where neural network model gets train to predict output based on input image.
- Further based on those outputs received from trained model using Py-serial RF car was controlled.

### Games Development(Pygame, Arduino)

Self Project — *May. 2014*

- A fully functional famous 2048 game adding advance features like dynamic number of rows and columns, sending score to Email.
- The code has been developed in python using one of the gaming modules, PyGame.
- Cricket Game made using Arduino an open-source electronics platform, Liquid crystal Library to interface LCD screen with Arduino and switch controllers for controlling game. This game was exhibited in Nimble IIT-J technical event.

## Courses & Programming Tools

### Courses Undertaken

* marked courses are present running, rest are complete

- *Digital Signal Processing, *Information Theory and Encoding, Data Structure and Algorithms, Communication System, Digital Logic and Design, Microprocessors and Microcontrollers, Power Systems, Power Electronics.

### Programming Language & Tools

* marked represent familiarity only, rest are significantly experienced

- Languages - C, Python, HTML, CSS, JavaScript, *PHP
- Software - MATLAB, Opencv, *Pspice
- Boards -Arduino, Raspberry pi, 8085 developer kits

## Scholastic Achievements

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| 2015, 2016 | **Merit (M.C.M) Scholarship**, Got selected for institute's Merit-Cum-Means (M.C.M) Scholarship for two consecutive years. |
| 2014 | **IDB Scholarship Program**, Got selected for IDB Scholarship out of 25,500 applicants all over India. |
| 2013 | **Among top 1% in JEE-ADVANCED**, (around 150,000 students) and JEE MAIN (around 1,200,000 students) |

## Position of Responsibility

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|---|---|
| 2014-2015 | **Coordinator, Electronics Club**, Organised and delivered various lectures and workshops in the field of Electronics.Supervised the Budget Allocation and procurement of various equipment required for the club. |
| 2015 | **Assistant coordinator Tech Events Ignus 2015**, Planned, Supervised and organized all the technical electronics events in IGNUS 2015, an Inter-College Techno-Cult fest with a participation of 8,000 people from all over the country. |