

# Alish Kanani

Pre-final Year (B.Tech)  
Electrical Engineering  
Indian Institute of Technology (IIT) Jodhpur

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## Education

**B.Tech - Electrical Engineering**  
IIT Jodhpur  
Expected 2021  
CGPA : 8.75/10 (Till 5th Semester)

**Higher Secondary (HSC)**  
Ashadeep Science Bhavan  
2017 | Surat, Gujrat  
Percentage: 94.4%

**Secondary (SSC)**  
M N J Patel High School  
2015 | Surat, Gujrat  
Percentage: 87.66%

## Relevant Courses

**Electrical Core**  
Digital Logic and Design  
Microprocessors and Microcontrollers  
Analog Electronics  
Signal and Power Integrity  
Power Electronics  
Circuit Theory  
Communication Systems  
Signals and Systems  
Electrical Machine  
Power System  
Physics of Semiconductor Device  
Digital Signal Processing\*  
Control Systems\*  
(\* Ongoing courses)

**Fundamental Mathematics**  
Real Analysis and Linear Algebra  
Complex Analysis and Differential Equations  
Probability and Statistics

## Skills

**Language**  
C  
Python (Basic)  
MATLAB  
Perl(Basic)

**HDL**  
Verilog

**Software**  
Xilinx (ISE)  
Synopsys DC  
Simulink  
Iverilog  
Arduino  
Energia

## Internship

**Accuracy Configurable Arithmetic Circuit | IIT Ropar**  
Research Intern | May 2019 - July 2019 | Guide: [Dr Neeraj Goel](#)

- Studied various existing approximate binary adders and multipliers
- Proposed **An Accuracy Configurable Adder** and helped in **An Accuracy-Configurable Rounding-Based Multiplier**
- Compared proposed algorithms with state of the art algorithms in Synopsys Design Compiler and in octave (1 million times) to calculate error matrix

## Projects

**DHVANIK - Wearable Tympanometric Diagnostic Tool for Middle Ear Ailments**  
Inter IIT Project | Sep 2019 - Dec 2019 | Guide: Dr Arpit Khandelwal

- Developed a low-cost, user-friendly, IoT enabled, head-phone sized tympanometer that detects middle ear problem
- Made business model for IICDC 2019 and Inter IIT 2019

**Optimisation of 32 bit adders**  
B.Tech Project | Jan 2019 - Apr 2019 | Guide: Dr S. P. Tiwari

- Studied six different algorithms to add two binary numbers
- Compared delay, area and power of these algorithms in **Xilinx-ise**
- Project report and code: [github.com/AlishKanani/32bitAdders/](https://github.com/AlishKanani/32bitAdders/)

**AES Data Encryption on FPGA**  
Gymkhana Project | Sep 2018 - May 2019

- The aim of the project was to develop an FPGA based encryption engine to facilitate massive data encryption and decryption.
- Project link: [github.com/AlishKanani/AES/](https://github.com/AlishKanani/AES/)

**NETRA- Indoor Navigator for Visually Impaired**  
Texas Instruments IICDC Competition | Aug 2018 - May 2019

- Applied dead reckoning for indoor navigation without expensive infrastructure.
- Implemented on **Beaglebone black** using 9 axis **IMU**
- Audio and haptic feedback for navigation especially for the visually impaired

## Positions of Responsibility

**CAPTAIN** Electronics Club | Aug 2018 - May 2019

- Coordinated and managed year round activities and finance of the Electronics Club at IIT Jodhpur

**STUDENT GUIDE** Counselling Service | Aug 2018 - May 2019

- Mentored freshmen students as a Student Guide for their smooth transitioning into college/hostel life.

## Achievements

- Secured **Bronze** medal in Inter IIT Techmeet 2019
- Led the team of project NETRA and DHVANIK which reached the **semi-finals** of **DST** and **Texas Instruments** IICDC 2018 and 2019.
- Won **First Place** in the **Analog Designs** - an online contest by **Texas Instruments University Program**.
- Placed among the top **0.5% of 1.4 million** applicants in JEE Advanced 2017