## Preeti **Menghwani**

♥ Hall-6, IIT Kanpur, Kanpur, Uttar Pradesh, 208016, India

# **EDUCATION**

Indian Institute of Technology Kanpur, B.Tech. in Electrical Engineering, CPI: 7.8/10 2018 - Present

2016 - 17 The New Green Field Public Academy, Indore, Class XII, Percentage: 84.2%

Delhi Public School, Indore Class X, CGPA: 10/10

## 📑 Skill-sets

**Programming Language** C/C++, Python, Verilog

**Tools and Softwares** MATLAB, LABView, Autodesk Inventor, GNU-Octave, Git, LATEX

> Hardware Arduino, Raspberry Pi, Xilinx FPGAs, IMU, WiFi Module (ESP-8266)

## EXPERIENCE

### May 2019

Wi-TRACK, ELECTRONICS CLUB, IIT KANPUR

Jul. 2019 Summer Project, Advisor: Prof. A.R Harish (Dept. of Electrical Engineering)

- > Implemented a Frequency Modulated Carrier Wave RADAR capable of tracking human beings over a distance of 3m in presence of a solid obstacle between the walking human and the antenna pair.
- > Developed hardware subsystem consisting of a sweep generator, signal generator, frequency mixer and oscilloscope, and integrated it with the software stack using serial protocol for data logging (PvVISA).
- > Won the best Research & Development Project award in the Science & Technology Council.

Signal Processing Software-Defined Radio (NI-USRP)

## May 2019

Electromania, IIT KANPUR

Jun. 2019

Takneek 2018, Inter-Hostel Competition: Science & Technology Council

- > Designed a bare-metal gimbal system by estimating the real-time orientation by Inertial Measurement Unit(IMU - MPU6050) & remotely measured the error in real-time using lasers diode and WiFi module.
- > Extracted noise-free waveform of heartbeat pulses of a human using Near-Infrared Spectroscopy through infrared sensor and error rectifying components like low-pass filters, DC-bias remover.

Digital Circuit Designing | IoT | Arduino | ESP-8266 Wifi Module | MPU6050 (IMU) | Non-programmable ICs



### Relevant Course Work

Signals, Systems and Networks Hardware Description Languages for FPGA Design\* Control Systems\* Introduction to Electronics Microelectronics' Introduction to Electrical Engineering

Fundamentals Of Computing Partial Differential Equation Linear Algebra and Differential Equation

\*Ongoing \*\*Audited

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#### POSITION OF RESPONSIBILITY

# May 2019

Secretary,

Present

Electronics Club, IIT Kanpur:

- > Promoted Electronics as a hobby in IIT kanpur campus community through a variety of workshops, hackathons, and lectures.
- > Improved participation and mentored juniors in SnT competitions like Techkriti and Takneek.

#### May 2019

Student Guide,

Present

Counselling Service, IIT Kanpur:

- > Nurtured a group of fresher students from different majors in both their academics and campus life for their smooth transition into college life.
- > Volunteered in conduction of 10-day Orientation Program for freshers to familiarise them with IITK.

#### 🗱 Extracurricular Activity

- > Participated in State-level Volleyball Championship representing Indore District.
- > Won 1<sup>st</sup> prize in Street Photography Competition in Inter-IIT Cultural Meet 4.0.

### Awards and Achievements

- > Secured All Indian Rank(AIR) 1671 among 0.5 million students in JEE Advance 2018.
- > Secured All Indian Rank(AIR) 867 among 1.5 million students in JEE Main 2018.