

Vikram Singh

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Education

Indian Institute of Technology Ropar

B.TECH. IN ELECTRICAL ENGINEERING

CURRENT C.G.P.A : **7.65/10**

Ropar, India

August 2018 - Present

Saraswati Senior Secondary School

AISSCE (CLASS 12) - PCM

PERCENTAGE : **94.8 %**

Narnaul, India

March 2018

Saraswati Senior Secondary School

AISSE (CLASS 10)

C.G.P.A: **10/10**

Narnaul, India

March 2016

Skills

Programming Languages C, MATLAB, Verilog

Tools / Software LTspice, Pspice, Arduino

Projects

Time to digital Converter

Guide- Dr. Vinayak Hande

- Working on TDCs using **Vernier** method and **Time Amplification** technique.

Single stage integrated amplifiers

Guide- Dr. Devarshi Das

- Studied the behaviour of different types of (CMOS) **integrated amplifiers**.

Energy Effecient and faster SAR converter with capacitive DAC

Guide- Dr. Vinayak Hande

- Working on reducing **power consumption** in SAR converter and **increase its speed**.

Smart Waking Stick for Blind

Guide- Dr. Manigandhan S.

- Equipped the conventional walking stick with **Ultrasonic sensors & IR sensors**.
- Aid the user with **audio commands** through earphones which can help him in walking.

Bit Sequence Detector

Self Project

- Used **D Flip-Flop** and concept of **Karnaugh-maps** & **state machine**.
- Used **Moore** state machine and not considering **overlapping pattern**.
- Detects a **particular sequence** of bits (here, made for 1-1-0-1).

Radiation effects in CMOS circuits

Guide- Dr. Vinayak Hande

- Studied various **effects of radiation** on CMOS circuits.
- Working on **Radiation Hardening** techniques in CMOS circuits.

Relevant Courses

Electrical

Basic Electrical Engineering, Circuit Theory, Digital Circuits, Signals and Systems, Basic Electronics, Control Engineering, Computer Architecture, Electromechanics, Analog Circuits, Digital IC Design, Communication Engineering, Engineering Electromagnetics, Power Electronics, Power System*

Mathematics

Calculus, Linear Algebra, Differential Equations, Probability and stochastic process

(* marked are ongoing courses)

Positions of Responsibility

Mess Representative

July 2019 - Present

Representative of mess committee and acted as a bridge between students and Student Affairs.

Miscellaneous

Science Quiz Contest

Winner of **district level science quiz contest** and participated in **zonal level science quiz contest**(2017).

National Science Olympiad

Secured **school rank 1** (in 10th, 11th, 12th class) and **city rank 1** (in 11th, 12th) in National Science Olympiad.

Fest Work

Member of organising, PR team in sports fest **AAROHAN**(2019) and in cultural fest **ZEITGEIST**(2018) of IIT Ropar.

Sports

Participated in IYSC(2019) in 100m and long jump, won silver medal in power lifting in IYSC(2020) at IIT Ropar.

IIT Ropar Run (11, 5 km)

Participated in **IIT Ropar Run** (2nd, 3rd edition) on **Gandhi Jayanti** to promote health, welness and fitness.

Pehchaan-ek-Safar (NGO)

Volunteer of **Pehchaan ek Safar** (NGO) run by IIT Ropar students and taught unprivileged children.