



**Sahukari Chaitanya Varun**  
Bachelor of Technology (Honors)  
in Electrical Engineering  
Indian Institute Of Technology, Hyderabad

+91-7095075634  
ee19btech11040@iith.ac.in  
GitHub | Chaitanya Varun  
LinkedIn

## EDUCATION

Degree	Institute/Board	CGPA/Percentage	Year
Bachelor of Technology	Indian Institute of Technology, Hyderabad	9.35*	2019-2023
Honors in EE	Indian Institute of Technology, Hyderabad	9.33*	2019-2023
XII	Telangana State Board of Intermediate Education	98.2%	2019
X	Board of Secondary Education, Telangana	10	2017

## WORK EXPERIENCE

- **GPAI** May 2022 - Present  
*Project Associate* Hyderabad
  - Part of Future of Work, Student Team under **Prof. Uday B. Desai**.
  - Developed a common web platform for AI research communities to collaborate and share their work with the world.
- **Teaching Assistant** Aug 2022 - Dec 2022  
*Data Structures and Applications, ID2230* IITH
  - Tutoring and evaluating the students taking the course.
- **Oracle** June 2022 - July 2022  
*Project Intern* Bengaluru
  - Working in the Fusion Analytics Warehouse (FAW) Team
  - Detection of Susceptible Actions through analytical means.
- **DRDO, Advanced Systems Laboratory(ASL)** Dec 2021 - Jan 2022  
*Winter Intern* Hyderabad
  - Worked in the domain of Radar Signal Processing
  - Applied machine learning models in place of traditional algorithms for PRI estimation problem.
- **5G Testbed - WiSig Networks** June 2021 - August 2021  
*Project Intern* Hyderabad
  - Worked in the Physical Layer Team.
  - IP Core design with Vivado HLS and Embedded programming

## RESEARCH EXPERIENCE

- **BIPED Vision Robot** Present  
*Student Researcher under Dr. Sumohana S. Channappayya* LFOVIA,IITH
  - Working on the vision aspect of a BIPED Robot.
  - Tasks include scene detection, object detection, video stabilization, segmentation, etc.
- **IEEE, SP Cup** 2022  
*Student Researcher under Dr. Sri Rama Murty Kodukula* SIP Lab,IITH
  - Worked on speech spoof attribution methods and won worldwide first runner-up.
  - Presented our work in **ICASSP 2022, Singapore**.
  - The same work poster presented at the **Purdue Graduate Showcase** event won the **People's Choice Award**
- **OCT Volume Registration** 2022  
*Student Researcher under Dr. Soumya Jana* Immersive Multimedia Lab,IITH
  - A collaborative research done with **University of Pittsburgh**.
  - Curation of dataset and testbench it using different metrics.
  - Application of various registration techniques on the volumes and enhance the quality of the volume.
- **JTG,IEEE IT SoC Summer School** June 2022  
*Student Attendee* IIT Mandi
  - Attended lectures by renowned mathematicians on the advanced topics of information theory

## PUBLICATIONS

- **Evince the artifacts of Spoof Speech by blending Vocal Tract and Voice Source Features, 2022**
  - Joint work done with **Dr K Sri Rama Murthy**, IIT Hyderabad, India.
  - Submitted to **IEEE Transactions on Information Forensics and Security** as **First Author**. [[pre-print](#)]
  - We worked on developing a DNN model for classifying spoof algorithms, we exploited the framework of Linear Predictive Coding to enhance the artifacts of spoof signals.
  - The DNN's attention focuses at the transitions of the phonemes for discrimination which depicts the failure of current speech generation algorithms.

## SELECTED PROJECTS

---

- **Flipkart Grid-3 Hackathon**  
*Built an automated delivery bot which lead us to be one in the finalists across the nation.*
- **Inter IIT - Engineers Conclave, IIT Kharaghpur**  
*Presented Automated Sudoku Solver using CNN and backtracking algorithm.*
- **Path Navigation Setter**  
*Implemented gyro-based path correction for straight moving bot*
- **Indo-Swiss Virtual Sustainability Challenge**  
*Developed a proof of concept for the problem of the sustainable fabrics industry with cross-country collaboration.*
- **Project Album**  
*Worked on PhotoClassification using OpenCV and Deep Learning.*
- **SIR Pandemic simulation**  
*Performed a Covid Simulation using Data Structures (Graphs, Queues) as a part of Academia*
- **Hardware Calculator**  
*Built a hardware calculator using ATmega328P,avr-gcc, oscillators and other basic electric components as a part of academia*
- **Voice Controlled Car Bot**  
*Built a Voice Controlled Car using a feed-forward linear layer written from scratch using NumPy and scipy as a part of academia.*
- **Drone**  
*Built an auto-pilot drone as a part of academia using MissionPlanner*
- **Finger Print based Security system**  
*Developed it as a team for an independent project using Arduino, servos, and other basic electric components.*
- **Image Deblurring using Gyro-data**  
*Implemented a GAN-based architecture to deblur images using the IMU readings(gyroscope) of the capturing device.*

## TECHNICAL SKILLS

---

- **Programming Languages:** Python, C++,C,Matlab,Octave
- **Micro-controllers handled:** Arduino, Raspberry Pi
- **Operating Systems worked on:** Windows10, Linux(Ubuntu)
- **Electronic Simulators worked with:** LTSpice, NGSpice
- **CAD Software worked with:** KiCAD, Solid Edge

## ACHIEVEMENTS

---

- **Recipient of AFS JENESYS(Japan-East Asia Network of Exchange for Students and Youths) scholarship.,** 2022-23
- **Awarded Academic Excellence Award on 14th Foundation Day of IITH,** 2022
- **Selected as a Project Intern at Oracle in Server Technology and was offered the full-time role. ,** 2022
- **Pursuing Honors in Electrical Engineering,** 2021
- **Secured AIR 1702 in JEE Advanced ,** 2019
- **Two times AMTI round-2 qualifier,** 2017,2016

## RELEVANT COURSES

---

- **Communication Technologies and IoT:** Digital Modulation Techniques, Communication Systems, Introduction to Drones, Internet of Things(IOT)
- **ML and Computing:** Introduction to Computing, Introduction to AI and ML, Introduction to Modern AI,Certified in Python, Intro to Machine Learning, Pandas, Data Visualisation, Intro to Deep Learning and Computer Vision in Kaggle
- **Signal Processing and Information Theory:** Matrix Analysis, Signals and Systems, DSP, Advanced DSP, Data Analytics, Random Processes, Information Sciences, Pattern Recognition and Machine Learning, DSP Lab, Introduction to Group Theory, Source Coding, Channel Coding, Convex Optimization, Concentration Inequalities, Intro to Sub-Modular Functions, Intro to Statistical Learning, Topics in Signal Processing
- **Computer Science Courses:** Introduction to Data Structures, Linear Optimization, Data Structures and Algorithms
- **Control Theory:** Network Theory and Synthesis, Control Systems, Certified in Matlab Onramp, Mathworks,Advance Control Theory
- **Digital Electronics:** VLSI Design, Intro to HDL, Digital System Design, ADLD, Semiconductor fundamentals and electronic devices, Electric and Magnetic Circuits
- **Analog Domain:** Integrated Circuits for Wireless Communication, Analog Circuit, Analog lab, Analog Electronics

## POSITIONS OF RESPONSIBILITY

---

- **SciTech ,**Coordinator (present mentor) for Elektronika(2021-22), Core in Robotix and Elektronika(2020-21)
- **Cultural ,**Core of Irshaad-Stan Up Domain(2020-21)
- **Elan nVision Fest,**Sponsorship Coordinator(2020-21), Event Organizer of Elan-e-Jung(2019-20)

## MISCELLANEOUS

---

- **Part of Shufe Crew - the dance club(2019-20),**
- **Part of Milan(Inter Hostel League)-2021 in dance, drama, and badminton team,**
- **Winner of SciTech General Championship in Milan(2022), Gold Medal in RC car racing, Bronze Medal in robosoccer,**
- **NSO Badminton.,**