

Anjali Verma

EMBEDDED SOFTWARE DEVELOPERS

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Personal Profile

As a Communication and Signal Processing Master of Technology student, I have developed a strong foundation in the principles and applications of communication and signal processing. My coursework provides me with in-depth knowledge of various digital signal processing techniques, communication systems, and their applications in diverse fields.

Education

Indian Institute of Information Technology Guwahati

Guwahati, India

Mtech in Communication and Signal Processing Engineering

August 2022 - Current

- **Courses:** Wireless Communication, Dynamics Learning, Security and Network System, Machine Learning, Linear Algebra, Statistics, and Random Process, Advanced Digital Signal Processing, Advanced Digital Communication, Antenna Theory and Design, System on chip with IoT Application

Shri Shankaracharya College of Engineering

Bhilai, India

B.E. in Electronics and Telecommunication Engineering

May 2016 - May 2020

- **Grade:** 7.7

S. E. C. Railway Mixed Higher Secondary School

Bilaspur, India

Higher Secondary

June 2012 - May 2014

- **Percentage:** 53.4
- Specialised in Physics, Chemistry, and Maths with Computer Science

Work Experience

Innovation4u

Bhilai, India

Embedded Designer

Dec 2018 - Jan 2020

- **Automatic surveillance security camera:** Surveillance technology is used to monitor individuals' digital and physical actions and communications. Common forms include data-gathering apps on smartphones, and facial recognition software in smart security camera systems.
- **Anti-theft vehicle security:** An anti-theft device aims to prevent thieves from stealing your car, or to help locate and retrieve it if a theft does occur. **Software Requirement:** Embedded C or Assembly, MP Lab and CCS C Compiler
- **Solar Panels using Arduino:** We measure the intensity of light with LDRs using Arduino and compare the intensity of light falling on both LDRs. We need a servo library to control the motion of the servo.
- **Soft Skills:** Time Management, Communication, Presentation skills.

University Projects

Clustering-classification approach for human activity detection using smartphone dataset

Guwahati, India

Indian Institute of Information Technology Guwahati

Feb 2023 - Current

- Individual Project of ML in the supervision of professor.
- HAR Dataset from UCI dataset storehouse is utilized. This dataset is collected from 30 persons, performing different activities with a smartphone to their waists.
- This project is defined by classification and clustering approach.
- **Technical Skills:** Python(Pandas, Numpy, Scikit learn), PyCharm, Google Colab, \LaTeX (Overleaf)
- **Soft Skills:** Leadership, Presentation skills, Report writing.

Voice Typing Braille Pad System

Bhilai, India

Shri Shankaracharya College Of Engineering

Feb 2018 - Apr 2018

- Collaboration with a three-person team to develop a voice typing braille pad system.
- **Methodology:** Software Framework, Free Android Application, Actuators.
- This project explains the idea of messaging system for visually impaired people. This vital technology tool and its application in the area of telecommunication have significant and widespread.
- **Technical Skills:** MS PowerPoint.
- **Soft Skills:** Leadership, Teamwork, Presentation skills, Report writing.

Vehicle tracking system

Bhilai, India

Shri Shankaracharya College Of Engineering

Nov 2017 - Dec 2017

- This project is presented individually.
- The project is designed for using surveillance camera on a panning platform i.e. moving the camera, mounted on a DC motor in clockwise and anticlockwise direction in periodic intervals.
- **Requirements:** 1.Power supply, 2.PCB layout of Automobile Surveillance Camera, 3.Microcontroller ATMEGA328, 4.LCD display, 5.Infrared sensor, 6.Photo diode, 7.Survey Motor, 8.Webcam, 9.LED, 10.Resistors, 11.Capacitors, 12.Voltage Regulator, 13.Transformer, 14.Potentiometer, 15.Connecting Wires
- **Soft Skills:** Presentation skills, Communication Skill, Logical Thinking.

Skills

Programming	Python (Pandas, PyTorch, NumPy, Scikit-learn. etc.), Matlab, C.
Technical Skills	Knowledge of Microcontrollers, Microprocessors, Real-time Operating Systems, Digital electronics, Basics of UVM, Basics of HDL
Miscellaneous	Windows, \LaTeX (Overleaf/R Markdown), Microsoft Office, PowerPoint, Github.
Soft Skills	Time Management, Teamwork, Problem-solving, Documentation, Engaging Presentation, Communication.

Others

- **On Going Research topic-**
- **Intelligent reflecting surfaces with mobile communication:** This technology improvises the performance of wireless communication networks. The IRS-aided hybrid wireless network helps in achieving sustainable capacity growth cost-effectively in the future.
Intelligent reflecting surfaces with mobile communication using this technology check the reduction of malicious signals via IRS and increase the SNR for a malicious user.
- **MIMO communication:** This is the technology in which wireless communication uses multiple antennas at the transmitter as well as the receiver to minimize the errors, optimize data speed and improve the capacity of radio transmission.
MIMO communication using this technology will try to boost the capacity of radio frequency which we create a stable connection with less congestion.

Interests

Cooking	I love cooking. I am an expert in most Indian-style cooking, enjoy baking and making my own pizza.
Travelling	I would like to go long travel journey. I already visited south and north India as well as some parts of northeast.
Reading Novel	I love to read books and novels in my free time.
Art	I have always enjoyed drawing since I was a child. Recently, I have shifted to digital art mostly on Inkscape.

Languages

English	Professional proficiency
Hindi	Native proficiency