

Pankhuri Vanjani

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Education

The LNM Institute of Information Technology | Cum. GPA : 7.80/10

B.TECH IN ELECTRONICS AND COMMUNICATION ENGINEERING

Jaipur, Raj., India

July 2016 - PRESENT

St. Xavier's Senior Secondary School | Percentage : 91.6/100

HIGHER SECONDARY EDUCATION IN SCIENCE STREAM

Jaipur, Raj., India

May 2015

St. Xavier's Senior Secondary School | Cum. GPA : 10/10

SECONDARY EDUCATION

Jaipur, Raj., India

May 2013

Honors & Awards

2018 **Quarter Finalist**, DST & TI India Innovation Challenge Design Contest | Certi Link

India

2017 **Merit Scholarship**, National Talent Search Examination

Jaipur, India

2017 **2nd Place**, Innovation challenge by Robotics Club

Jaipur, India

2016 **2nd runner up Place**, Smart city idea contest, IEEE

Jaipur, India

2017 **Top 10 finalists**, LNM HACKS 2.0 at LNMIIT

Jaipur, India

Experience

The LNM Institute of Information Technology

TEACHING ASSISTANT: IOT LAB

Delhi, India

Jan 2019 - current

- Assisting students with IOT lab experiments and projects on Intel Galileo board.

Indraprastha Institute of Information Technology (IIIT-D)

SUMMER RESEARCH INTERN | LINK

Delhi, India

May 2018 - June 2018

- Work on simulating a collision avoidance technique in gazebo using Collision Cone approach for multi-UAV's control with ROS under the guidance of Dr. P.B. Sujit

VLSI and Embedded System Design

SUMMER INTERNSHIP CUM TRAINING PROGRAM ON VLSI AND EMBEDDED SYSTEM DESIGN | LINK

The LNM Institute of Information

Technology, Jaipur

June 2017 - July 2017

- Some mentionable tools like Vivado used for VHDL circuit design, FPGA's like Zybo, Spartan 3, Embedded system boards like Intel Galileo, Beagle Bone, Embedded Artist, Picoblaze etc. were used to design many practical solutions.

Publications

Image Processing based Intelligent Robotic System for Assistance of Agricultural Crops (accepted for publication)

INTERNATIONAL JOURNAL OF SOCIAL AND HUMANISTIC COMPUTING

Jaipur, India

Feb 2019 - current

- This paper is based on a robotic system consisting of a drone and a ground hover which helps in agriculture monitoring and assistance. It has been accepted for publication in inderscience journal.

Projects

Vision based navigation for Unmanned Vehicle

PROJECT LEAD | NOV 2018 - CURRENTLY GOING

- This proposal is focused on developing an autonomous navigation system for a UAV based on vision based techniques. In an unknown environment, where GPS is not feasible anywhere, cameras and on-board sensors are used together for understanding the scene and making decisions. VSLAM techniques along with sensor fusion is being used to develop path planning algorithm of UAV

Collision Avoidance in Co-operative multi-UAV's

PROJECT LEAD | MAY 2018 - JULY 2018 | PROJECT PRESENTATION

- Designed collision avoidance Algorithm for multi-uav's using ROS and Gazebo as a part of research project in internship in IIIT Delhi under Dr. P.B. Sujit.
- The completed algorithm was implemented using rospy packages in Gazebo simulator. The location data was taken from internal IMU's and external GPS.

Smart Farming Bot

LEADER | DEC 2017 - MARCH 2018 | PROJECT VIDEO

- Smart farming bot with Beaglebone Black as the core microprocessing unit, controlled by web server has been designed it supports farmer in classifying field for mixed cropping, analyzing soil as well as disease detection by analyzing leaves.

PREDICTION OF ARRHYTHMIA

PROJECT LEAD | AUG 2016 - DEC 2016

- A MATLAB based project which analyzes heartbeat signals and using various algorithms predicts the presence of disease. MIT cardio database has been used for testing the algorithm..

SPY BOT USING RASPBERRY PI

CORE MEMBER | JUNE 2017 - JULY 2018

- autonomous bot controlled by web server using face detection to alert user.

FITNESS DEVICE AND TRAFFIC LIGHT CONTROLLER USING TIVA

PROJECT LEAD | NOV 2018 - CURRENTLY GOING

- Tiva launchpad integrated with Booster pack and C2650 Wireless MCU were used to create it.

ARDUINO PROJECTS

PROJECT LEAD | AUG 2016 - DEC 2016

- IR controlled water tap and password secured case as a prototype.

Linux Os porting on Zybo Zynq 7000 ARM/FPGA Soc

MEMBER | JUN 2016 - JULY 2016

- Created a new IP with Vivado Design Suite and SDK software using VHDL and Verilog. Then generated Boot bin file consisting of SDK and 1st stage Bootloader. Then using u-boot 2nd stage Bootloader was created. For generating file system Ram Disk Image was created. Linux Os was finally booted using sd card on Zybo board

Roles and Responsibilities

Chairperson, IEEE SB

THE LNM INSTITUTE OF INFORMATION TECHNOLOGY

Jaipur, India

Sept 2018 - current

- Introducing robotics and other technical fields to students, taking lectures and workshops, Managing the team

Associate Coordinator, Counselling Cell

THE LNM INSTITUTE OF INFORMATION TECHNOLOGY

Jaipur, India

July 2018 - current

- Mentoring freshers during their first year in college and managing the team

Vice-Chairperson, WIE, IEEE SB

THE LNM INSTITUTE OF INFORMATION TECHNOLOGY

Jaipur, India

July 2017 - May. 2018

- Conducted workshops and technical events for students.

Student Mentor, Counselling Cell

THE LNM INSTITUTE OF INFORMATION TECHNOLOGY

Jaipur, India

July 2017 - May. 2018

- Mentoring freshers during their first year in college

Tech-fest Plinth, The LNM Institute of Information Technology

EVENT LEAD | WEBSITE LINK

Jaipur, India

2018

- Member of the college's robotics committee for organizing national annual technical fest of college.

The LNM-IIT Centre for Smart Technologies

Jaipur, India

CORE NUCLEAR MEMBER | WEBSITE LINK

2017 - 2018

- Worked as core member along with 5 college professors to guide undergraduate students' projects in the field of IoT and smart technology.

Phoenix (Robotics Club), The LNM Institute of Information Technology

Jaipur, India

SUBCOORDINATOR, COMPUTER VISION DIVISION | WEBSITE LINK | YOUTUBE CHANNEL

2018 - current

- This club gives technical training and guidance to enthusiastic students in the field of Robotics, Computer Vision, Electronics and Embedded System
- Being sub-coordinator/coordinator of the club, I have given technical lectures, laboratory sessions in different technical fields.
- We have also conducted various technical competitions in and outside the institutes to provide a technical platform to interested students.
- I have also led many students' teams for different technical competitions.
- This club is a hub of technical enthusiasts who are really willing to learn and contribute to society. I have taken care of every aspect of this club with all my will and dedication.

Skills

Programming, •ROS • Python • Matlab • C • C++ • VHDL • HTML • CSS • Linux

Software, • Gazebo • SITL • open3d • openCV • Mentor Graphics • PCL (Point cloud library) • Vivado •

Xilinx SDK • Arduino IDE • Anaconda • Eclipse • Multisim • Keil • AVR Studio

Hardware, • Beaglebone Black • Arduino • Intel Atom board • Intel Galileo • Raspberry Pi • NodeMCU (ESP8266) • Embedded Artist • Microchip PIC • TI TM4C123G • Zybo board • Pixhawk

Certified Courses

OpenCV in Python and Machine Learning

UDEMY

Estimation and Learning

COURSERA | LINK

Robotics: Vision Intelligence and Machine Learning

EDX

Autonomous Navigation for Flying Robots

EDX

Realtime Bluetooth Networks

EDX

Embedded Systems - Shape The World: Multi-Threaded Interfacing

EDX

UT.6.03x: Embedded Systems - Shape the World

UT AUSTIN | CERTI LINK