TechieNest

Transforming Engineers to Technocrats

presents

IOT & RASPBERRY PI
Workshop

in collaboration with

INDIAN INSTITUTE OF IOT

NEXT BIG THING

TRENDING NOW

IOT & RASPBERRY Pi

TechieNest
Transforming Engineers to Technocrats

Celebrating the alliance

with the most prestigious institutes of our country
TechieNest takes proud on its Success everyday…
Certified by the **Standards of ISO** and **leading Institutes** of the Nation we have
proven to be a symbol of faith and dignity for our students.

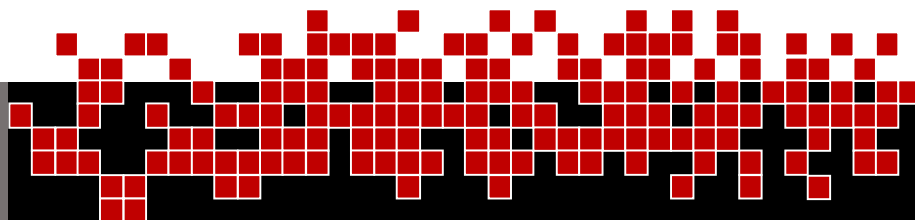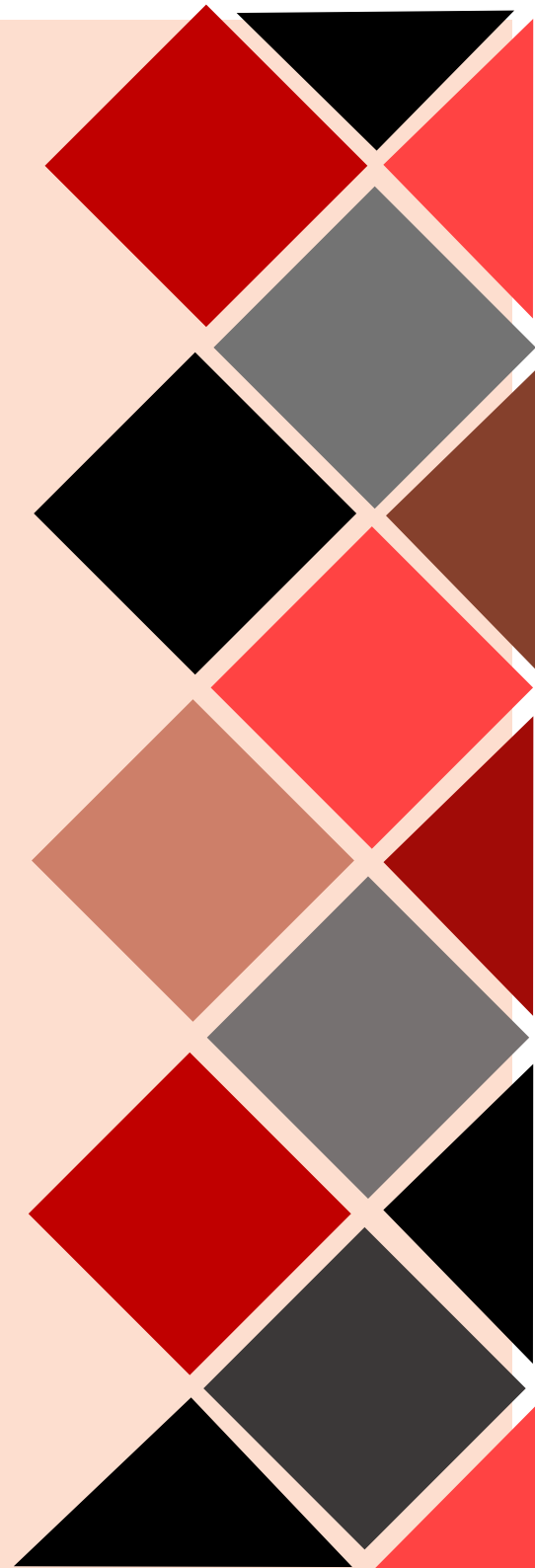|				
IIT Bombay	IIT Kanpur	IIT Roorkee	IIT Jodhpur	IIT Indore
IIT Hyderabad	IIT Bhubaneswar		IIT Mandi	NIT Raipur
MNIT Jaipur	NIT Jalandhar	MANIT Bhopal	NIT Srinagar	NIT Trichy

IOT & RASPBERRY Pi

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OUR FORTE

- ✓ Internet of Things (IoT)
- ✓ AI
- ✓ Machine Learning & Data Science
- ✓ Embedded Systems
- ✓ Robotics
- ✓ MATLAB & Machine Vision
- ✓ VLSI & VHDL
- ✓ Ethical Hacking
- ✓ Surface Computing
- ✓ Android App Development
- ✓ Automation (PLC & SCADA)
- ✓ Arduino
- ✓ PCB Designing
- ✓ Raspberry Pi
- ✓ Image Processing
- ✓ MSP430 (Texas Instruments)
- ✓ IC Engine

IOT & RASPBERRY Pi

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Introduction to IoT & Raspberry_Pi
- What is IoT
- Historical Background, Features, Applications & Scope of Raspberry_Pi
- Raspberry_Pi & its Various OS
- Introduction to Raspbian

Basics of Python Programming
- Features of Command Window & Script Window
- Basic Python Commands & Keyboard Shortcuts
- Defining Editing and Clearing Variables & Checking for Existence
- My First Python Program

High Level Programming and its Easy Interaction
- Introduction to Arrays
- Python Data Types and Basic I/O operations
- Various Python Functions & their use;
- Creating & running User defined Functions

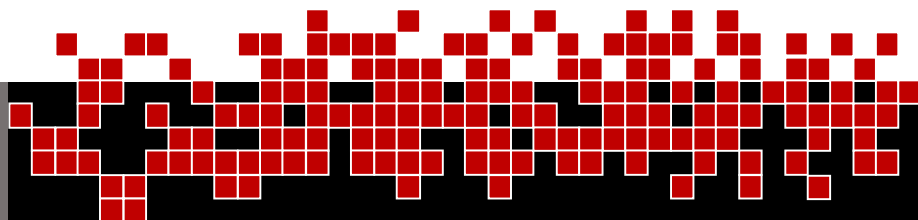### Project:- ATM Machine Prototype

Getting Started with Raspberry_Pi
- Raspbian – A Debian Derivative
- The Concept of Open Source
- Disk Fragmentation
- Installing & Starting Raspberry_Pi
- Understanding the Raspberry_Pi Desktop Layout
- Command Window (Terminal), Editor Window, Workspace, Command History, Graphic Window

Controlling I/O's
- Accessing GPIO Pins

Programming on Raspberry_Pi
- Glowing multiple different pattern LED

Ultrasonic Sensor

- Concept, Capabilities & limitations.
- Applications.

Practical 28: Interfacing Ultrasonic Sensor with Pi

Project: Distance measurement of an object using ultrasonic sensor

Relays

- Definition, Working Methodology,
- Types, Advantages & Application Areas
- Switching/Controlling of DC Relay using Pi

Practical: Interfacing Relay with AVR

Project: Seminar/Conference Hall Automation

IOT over cloud

- What is cloud?
- What are the features & scope of using IOT over cloud?
- Data connectivity of IoT devices with open cloud.
- Development of various applications in IoT.

Working with API

- What is API
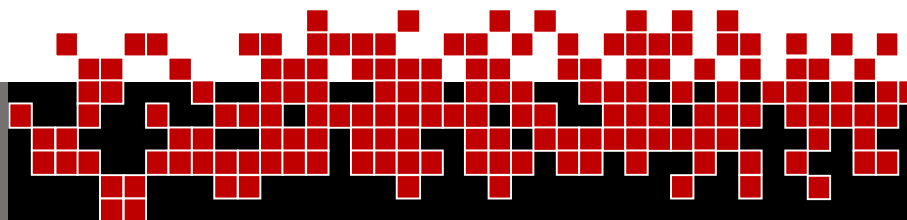- How to use API with Python
- Controlling Raspberry_Pi with API

Practical: Smart parking system using IoT

Project: IoT device for accident detection

Project: IoT Controlling through Smart Phone over Wifi

Project: Worldwide Accessing and controlling of IoT automation over Internet

Query Session/ Competition

www.techienest.in

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WORKSHOP TOOLKIT

- ✓ Raspberry Pi 3B
- ✓ Memory Card 16 GB
- ✓ USB Cable
- ✓ Bulb & Holder (2 set)
- ✓ Connecting cable & Wires
- ✓ Relay board
- ✓ LAN cable (type 5)
- ✓ Screw Driver

Provided in a group of 6 Students (Refundable)

ARRANGEMENTS

- ✓ A seminar hall/Class room with seating capacity of 100 students
- ✓ One projector.
- ✓ 2 Collar mike with sound system.
- ✓ White board and marker.
- ✓ Workshop coordinators(3-5)
- ✓ Laptop charging points.
- ✓ One laptop/PC to each group.

By College Coordinator

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BENEFITS

- ✓ Acquaint yourself with practical knowledge.
- ✓ Workshop taken by Exceptionally Qualified and Professional Trainers actively involved in Research & Development.
- ✓ Learn your Area of Interest directly from Industry Experts.
- ✓ Scales up your CV/ Resume in Technical while boosting your Logical Abilities.
- ✓ Brings Confidence in you for Technical rounds of Interview.
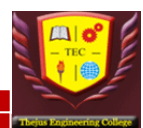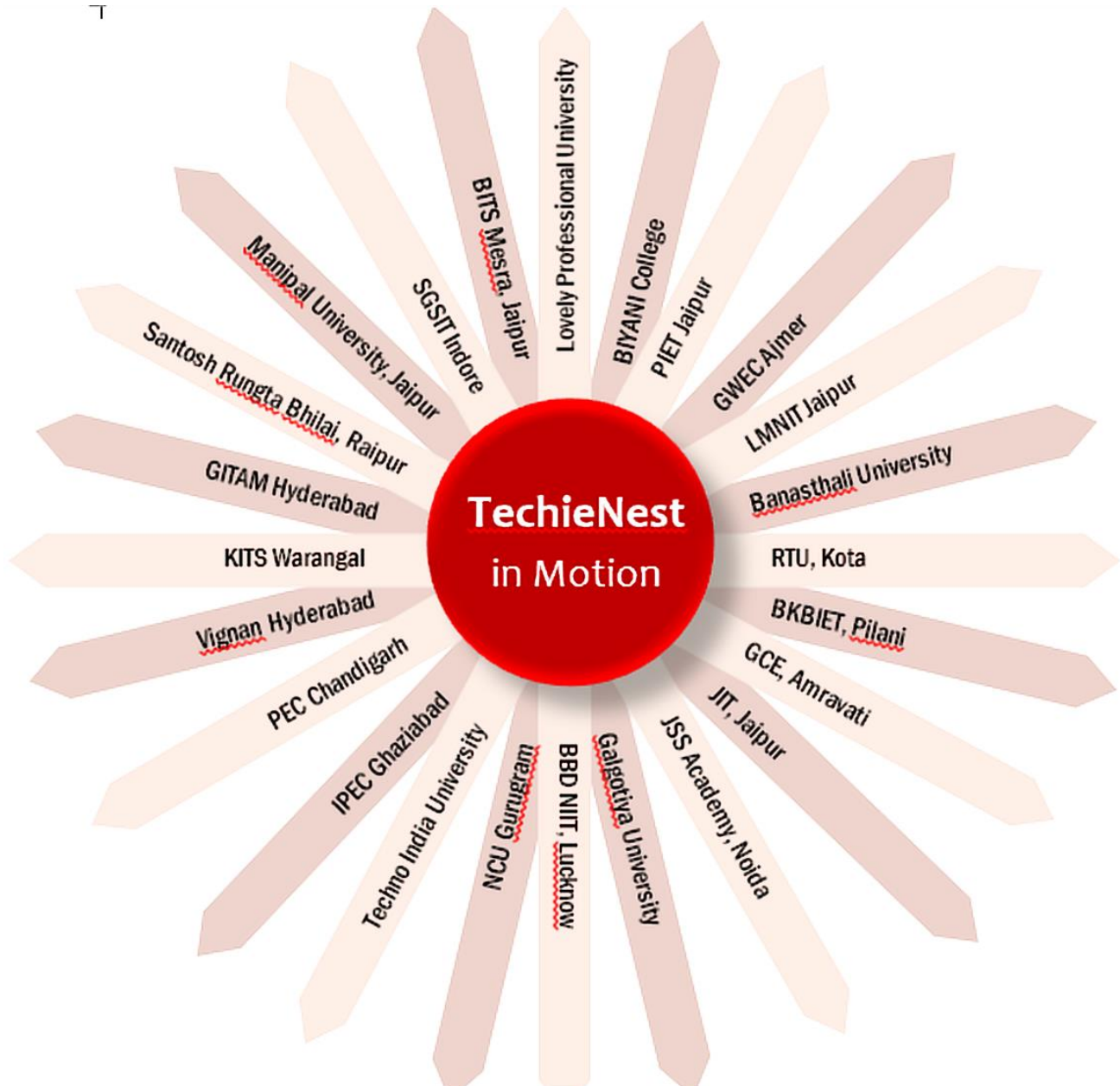- ✓ Lifetime assistance on any of your projects.

TAKE AWAYS

- ✓ Certificate of Participation
- ✓ Certificate of Coordination
- ✓ Certificate of Appreciation to College
- ✓ Relevant Software.
- ✓ Study Material (Soft Copy) FREE.

IOT & RASPBERRY Pi

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TechieNest in Motion

- Lovely Professional University
- BITS Mesra, Jaipur
- SGSIT Indore
- Manipal University, Jaipur
- Santosh Rungta Bhilai, Raipur
- GITAM Hyderabad
- KITS Warangal
- Vignan Hyderabad
- PEC Chandigarh
- IPEC Ghaziabad
- Techno India University
- NCU Gurugram
- BBD NIIT, Lucknow
- Galgotiya University
- JSS Academy, Noida
- JIT, Jaipur
- GCE, Amravati
- BKBIET, Pilani
- RTU, Kota
- Banasthali University
- LMNIT Jaipur
- GWEC Ajmer
- PIET Jaipur
- BIYANI College

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Centres

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