

1. Smart Home Automation System

- **Description:** Control home appliances such as lights, fans, and security cameras remotely using a smartphone app.
- **Technologies:** ESP32, Blynk, MQTT, Relays.

2. IoT-Based Health Monitoring System

- **Description:** Track health parameters like heart rate, temperature, and blood pressure and upload them to the cloud for real-time monitoring.
- **Technologies:** ESP8266, Health Sensors, IoT Cloud, Mobile App.

3. Smart Irrigation System

- **Description:** Automate irrigation using soil moisture sensors and weather data to optimize water usage.
- **Technologies:** Soil Moisture Sensors, ESP32, IoT Cloud, Water Pumps.

4. Air Quality Monitoring System

- **Description:** Monitor air quality, including CO2, PM2.5, and temperature levels, and alert users through a mobile app.
- **Technologies:** Air Quality Sensors, ESP8266, IoT Cloud, Data Visualization.

5. Smart Energy Meter

- **Description:** Track energy consumption and costs in real-time, and provide users with data analytics via a mobile app.
- **Technologies:** Energy Meter Module, ESP8266, IoT Cloud, Web Dashboard.

6. IoT-Based Smart Parking System

- **Description:** Detect available parking spaces and provide drivers with real-time parking availability information.
- **Technologies:** Ultrasonic Sensors, ESP8266, IoT Cloud, Mobile App.

7. IoT Smart Waste Management System

- **Description:** Monitor garbage levels in bins and notify authorities when bins need to be emptied.
- **Technologies:** Ultrasonic Sensors, ESP8266, IoT Cloud, Mobile Notifications.

8. IoT-Based Fire Detection and Alert System

- **Description:** Detect smoke and fire in a building and send real-time alerts to emergency services.
- **Technologies:** Smoke Sensor, Flame Sensor, ESP32, IoT Cloud, Blynk App.

9. IoT-Based Home Security System

- **Description:** Design a smart security system that uses cameras and motion sensors to detect intrusions and send alerts.
- **Technologies:** PIR Sensor, ESP32, Camera Module, IoT Cloud.

10. Smart Door Lock

- **Description:** Create a smart door lock system that can be controlled remotely via a smartphone.
- **Technologies:** RFID, Fingerprint Sensor, ESP32, IoT Cloud.

11. IoT-Based Smart Lighting System

- **Description:** Control home lighting based on occupancy, time, and ambient light levels.
- **Technologies:** LDR, PIR Sensors, ESP32, IoT Cloud, Blynk.

12. Smart Water Quality Monitoring

- **Description:** Monitor water quality parameters like pH, turbidity, and temperature and send alerts when values exceed safe limits.
- **Technologies:** pH Sensor, Turbidity Sensor, ESP8266, IoT Cloud.

13. IoT-Based Smart Thermostat

- **Description:** Design a smart thermostat that adjusts room temperature based on real-time data.
- **Technologies:** Temperature Sensor, ESP32, IoT Cloud, Mobile App.

14. IoT-Based Weather Station

- **Description:** Measure and monitor weather parameters like temperature, humidity, and wind speed, and display data on a web interface.
- **Technologies:** DHT11, Wind Speed Sensors, ESP8266, IoT Cloud.

15. IoT-Based Asset Tracking System

- **Description:** Track the location and status of valuable assets using GPS and IoT.
- **Technologies:** GPS Module, ESP32, IoT Cloud.

16. Smart City Traffic Management System

- **Description:** Design a system to monitor and optimize traffic flow using real-time traffic data.
- **Technologies:** IR Sensors, ESP8266, IoT Cloud, Data Analytics.

17. Smart Street Lighting System

- **Description:** Automate streetlights to turn on/off based on ambient light and traffic.
- **Technologies:** LDR, PIR Sensors, ESP32, IoT Cloud.

18. IoT-Based Pet Feeder

- **Description:** Build an automatic pet feeder controlled via smartphone, with scheduled feeding times and real-time monitoring.
- **Technologies:** Servo Motors, ESP32, IoT Cloud.

19. IoT-Based Inventory Management System

- **Description:** Monitor stock levels and automate inventory tracking in real-time using RFID and IoT.
- **Technologies:** RFID, ESP8266, IoT Cloud.

20. Smart Garden Monitoring System

- **Description:** Track soil conditions and automate watering and fertilization based on plant needs.
- **Technologies:** Soil Moisture Sensors, ESP32, IoT Cloud.

21. IoT-Based Smart Building Management System

- **Description:** Create a system that automates lighting, HVAC, and security in commercial buildings.
- **Technologies:** ESP32, Sensors, IoT Cloud.

22. IoT-Based Baby Monitoring System

- **Description:** Monitor a baby's temperature, movements, and sounds, and send real-time alerts to parents via a mobile app.
- **Technologies:** Motion Sensor, Sound Sensor, ESP32, IoT Cloud.

23. IoT-Based Smart Mirror

- **Description:** Build a smart mirror that displays weather updates, news, and daily tasks.
- **Technologies:** ESP32, Display Screen, IoT Cloud.

24. IoT-Based Vehicle Tracking and Anti-Theft System

- **Description:** Track the real-time location of a vehicle and receive alerts if it moves without authorization.
- **Technologies:** GPS, ESP8266, IoT Cloud.

25. IoT-Based Hospital Management System

- **Description:** Monitor patients' health conditions and automate hospital resource management.
- **Technologies:** Health Sensors, ESP32, IoT Cloud.

26. IoT-Based Smart Refrigerator

- **Description:** Track food items, expiration dates, and suggest recipes based on available ingredients.
- **Technologies:** RFID, ESP8266, IoT Cloud.

27. IoT-Based Smart Shower

- **Description:** Automate water temperature and flow control in the shower, with real-time monitoring of water consumption.
- **Technologies:** Temperature Sensor, ESP32, IoT Cloud.

28. IoT-Based Smart Farming System

- **Description:** Monitor crop health using drones and soil sensors, and automate irrigation and fertilization.
- **Technologies:** Drones, Soil Moisture Sensors, IoT Cloud.

29. IoT-Based Smart Shopping Cart

- **Description:** Design a smart shopping cart that tracks purchased items, calculates total cost, and suggests product recommendations.
- **Technologies:** RFID, ESP32, IoT Cloud.

30. IoT-Based Fire Fighting Robot

- **Description:** Build a fire-fighting robot that can detect and extinguish fires autonomously.
- **Technologies:** Flame Sensor, ESP8266, Motors, IoT Cloud.

31. IoT-Based Power Grid Monitoring System

- **Description:** Monitor power grid parameters in real-time, detect faults, and optimize energy distribution.
- **Technologies:** Current Sensors, Voltage Sensors, ESP8266, IoT Cloud.

32. IoT-Based Wastewater Monitoring System

- **Description:** Track the quality of wastewater in industrial plants and ensure compliance with environmental regulations.
- **Technologies:** Water Quality Sensors, ESP32, IoT Cloud.

33. IoT-Based Smart Geyser Control System

- **Description:** Automate a water geyser's temperature control and energy management, providing remote access through a mobile app.
- **Technologies:** Temperature Sensor, ESP32, IoT Cloud.

34. IoT-Based Smart Plant Pot

- **Description:** Monitor the growth of plants, including soil moisture and sunlight, and provide alerts when the plant needs attention.
- **Technologies:** Soil Moisture Sensor, LDR, ESP32, IoT Cloud.

35. IoT-Based Smart Greenhouse

- **Description:** Automate the temperature, humidity, and light levels in a greenhouse to optimize plant growth.
- **Technologies:** Temperature Sensor, Humidity Sensor, ESP32, IoT Cloud.

36. IoT-Based Food Quality Monitoring System

- **Description:** Monitor food storage conditions, including temperature and humidity, and send alerts if conditions are unsafe.
- **Technologies:** Temperature Sensor, Humidity Sensor, ESP32, IoT Cloud.

37. IoT-Based Cold Chain Monitoring System

- **Description:** Track the temperature of perishable goods during transport and storage in real-time to ensure they remain within a safe range.
- **Technologies:** Temperature Sensors, GPS, ESP32, IoT Cloud.

38. IoT-Based Vehicle Diagnostic System

- **Description:** Monitor a vehicle's health, including engine temperature, fuel consumption, and battery status, via IoT.
- **Technologies:** Sensors, ESP8266, IoT Cloud.

39. IoT-Based Smart Gas Leakage Detection System

- **Description:** Build a system that detects gas leaks and sends alerts to users, automatically shutting off gas valves.
- **Technologies:** Gas Sensors, Solenoid Valves, ESP32, IoT Cloud.

40. IoT-Based Smart Factory Monitoring System

- **Description:** Monitor factory machines and processes in real-time to optimize production and detect faults.
- **Technologies:** Sensors, ESP8266, IoT Cloud.

41. IoT-Based Inventory Theft Detection System

- **Description:** Track inventory in warehouses and send alerts if unauthorized access or theft is detected.
- **Technologies:** RFID, ESP32, IoT Cloud.

42. IoT-Based Smart Elevator System

- **Description:** Automate elevator operations based on user needs and monitor its real-time status.
- **Technologies:** Sensors, ESP32, IoT Cloud.

43. IoT-Based Underground Water Level Monitoring System

- **Description:** Measure underground water levels and monitor borewell performance for agricultural purposes.
- **Technologies:** Ultrasonic Sensor, ESP8266, IoT Cloud.

44. IoT-Based Attendance System

- **Description:** Design an attendance system that logs entry/exit times using RFID and uploads the data to the cloud.
- **Technologies:** RFID, ESP32, IoT Cloud.

45. IoT-Based Smart Library System

- **Description:** Create a system to track book check-ins and check-outs in a library automatically.
- **Technologies:** RFID, ESP32, IoT Cloud.

46. IoT-Based Smart School Bus Tracking System

- **Description:** Track the location of a school bus and provide parents with real-time location updates via a mobile app.
- **Technologies:** GPS, ESP8266, IoT Cloud.

47. IoT-Based Smart Green Energy Meter

- **Description:** Monitor and manage renewable energy sources like solar or wind, providing users with real-time energy consumption data.
- **Technologies:** Energy Meter, ESP32, IoT Cloud.

48. IoT-Based Vibration Monitoring System

- **Description:** Detect vibrations in industrial machines and send alerts to maintenance teams when abnormal vibrations are detected.
- **Technologies:** Vibration Sensor, ESP8266, IoT Cloud.

49. IoT-Based Smart Trash Compactor

- **Description:** Monitor trash levels in bins and activate an automatic compactor when necessary to reduce trash volume.
- **Technologies:** Ultrasonic Sensor, Motor, ESP32, IoT Cloud.



MIG 19/41, RAYAKOTTA HOUSING BOARD, RAILWAY STATION ROAD, HOSUR635109

Website: www.iepsolutions.in, Email: info@iepsolutions.in Mobile: 9698972511, 9047866448

50. IoT-Based Smart Ticketing System

- **Description:** Develop a smart ticketing system for public transport, allowing passengers to buy and validate tickets via a smartphone app.
- **Technologies:** RFID, NFC, ESP8266, IoT Cloud.