# **Major Project Problem Statements**

- 1. IoT Based Humidity and Temperature Monitoring Using Arduino Uno If you want to know the temperature/Humidity of your home on a real-time basis, you can see it in your smart mobile whenever you want and where ever you might be the information reaches you with a single click.
- 2. <u>IoT Weather Reporting system using Raspberry pi</u>
  As the scope for Automation is increasing, many industries and organizations are looking over a better option for weather reporting.
- 3. <u>IoT Connected Healthcare Applications</u>

For the rural area it is difficult to visit doctors for health monitoring frequently. IoT technology spread its wings to the Medical sector to save many lives. The aim of developing this project is to monitor the health condition of a person anywhere and send the information to a specialized doctor to check up.

4. <u>IoT Based Intelligent Traffic Management System</u>

As the population increases the effort on Traffic is also increasing. In many metropolitan cities, it is being difficult for the traffic Management team to control it

5. <u>IoT Based Smart Parking System Using RFID</u>

With the increase in usage of vehicles, Parking space is very difficult to find. we need to use the human effort to check where to park our vehicle.

6. Smart Irrigation System Using IoT

Every living organism needs food to live, We cannot imagine life without Irrigation. If everything gets automated even irrigation systems also need to be.

7. <u>IoT Based Smart Waste Management System for Smart City</u>

We have developed cities that have many facilities for making people's life simpler. But still, Waste management is a big challenge as the population is increasing day by day. We see the municipality waste management team monitoring all the dustbins every day even the dustbin is not filled.

8. IoT Based Smart Street Light

Energy consumption and management are a major task for people to lighten up our next generation's future. We waste electricity, Let's be smart enough in reducing energy consumption.

9. IoT based Water Quality Management system using Arduino

This project is used to test the quality of the water and sends the data to the cloud.

10. IoT based forest fire Alarm System

Increase in temperature, the problem of fire in forest is increased. To monitor the fire it is required to develop the system which can give the alarm whenever there is a fire in forest.

11. Smart Doorbell system using IoT

In this proposed system, we are having a database of authorized person list by registering their faces by entering OTP, so that non authorized person can't able to enter the home until they enter the correct OTP. Whenever some person pressing calling bell switch, the camera gets triggered and capture the image of the intruder and checks that the image to the database, if that face is not matching with the database, it sends an email containing that intruder image and

OTP, when intruder type the OTP by the owners' knowledge then it authenticates the user to enter.

#### 12. IVRS System for GIT

A system can be designed for knowing updated attendance of any student of college through IVRS (audio format). Any parent or student can call to a specific number and enter roll no by following step-by-step procedure. He / she will get a detail attendance of each subject till that day.

### 13. Automatic PCB Defect Detection using Image Processing

This problem is one of the common industry problem that can be solved by image processing approach. Automatic defect detection can be done based on photo of any pcb given as a input to the system.

## 14. Flame & temperature detection using image processing

Chemical industries generally have some banned areas for human being. These areas can be monitored by CCTV. However, instant change in temp or other parameters at such places may bring a huge cost to the industry. This issue can be solved by using image processing algorithms and motion based video processing.

#### 15. GIT FM Station

It will be tremendously great problem to design in GIT campus. Govt of India also motic=vate for in campus communication channels. This advantage can be taken for GIT and a try for making FM station for GIT campus will be most effective.

- 16. Mobile Application Development: Develop a mobile application that solves a specific problem or provides a useful service to users. This could be a social networking app, a productivity app, a gaming app, or any other type of app.
- 17. Mobile Security: Develop new security protocols and software for mobile devices to protect user data from cyber threats. This could include encryption technologies, authentication methods, and intrusion detection systems.
- 18. Mobile Health Monitoring: Develop a mobile health monitoring system that tracks vital signs and health data of users. This could include sensors that monitor heart rate, blood pressure, and other health metrics, along with a mobile app that displays this information to users.
- 19. Mobile Payment Systems: Develop a mobile payment system that allows users to make payments using their mobile devices. This could include features such as mobile wallets, digital currencies, and NFC-based payment systems.
- 20. Mobile Advertising: Develop a mobile advertising platform that allows businesses to target users with ads based on their location, interests, and other demographics. This could include features such as real-time bidding, ad targeting, and performance analytics.
- 21. Mobile Virtual Reality: Develop a mobile virtual reality system that allows users to experience immersive environments and simulations using their mobile devices. This could include features such as 3D rendering, haptic feedback, and motion tracking.

- 22. Mobile Cloud Computing: Develop a mobile cloud computing system that allows users to store and access data from anywhere, using their mobile devices. This could include features such as data synchronisation, cloud storage, and real-time collaboration.
- 23. Mobile Analytics: Develop a mobile analytics platform that collects and analyses data from mobile devices, providing insights into user behaviour, app performance, and other metrics. This could include features such as user segmentation, funnel analysis, and cohort analysis.
- 24. Mobile Education: Develop a mobile education platform that provides educational content and resources to students using their mobile devices. This could include features such as interactive content, quizzes, and progress tracking.
- 25. Mobile Gaming: Develop a mobile gaming platform that provides users with a fun and engaging gaming experience on their mobile devices. This could include features such as multiplayer modes, in-app purchases, and social networking features.
- 26. Solar back-up to devices that may have power or battery issues.
- 27. Chatbot for GIT website
- 28. Chatbot for GIT WhatsApp account to provide 24\*7 support
- 29. Classroom Automation
- 30. Real time attendance monitoring system
- 31. Water tank automation