

HARDWARE PROJECTS

Domain: Embedded Systems & Microcontrollers

1. Smart Home Automation Using Arduino
2. Temperature-Controlled Fan System
3. Automated Plant Watering System
4. Digital Thermostat With Display
5. Smart Door Lock System
6. Gesture-Controlled Robotic Arm
7. Digital Energy Meter With LCD Display
8. Wireless Home Security System
9. Automatic Street Light Controller
10. Smart Garage Door Opener
11. Microcontroller-Based Weather Monitoring System
12. Automatic Room Light Controller
13. Smart Gas Leakage Detector
14. Temperature and Humidity Logging System

15.Arduino-Based Home Energy Management

16.Voice-Activated Home Appliances

17.IoT-Based Smart Doorbell

18.Digital Clock With Alarm System

19.Embedded Smart Irrigation System

20.Arduino-Based Attendance Monitoring System

Domain: IoT Hardware

21. IoT-Based Weather Station

22. Smart Water Level Monitoring System

23. IoT Air Quality Monitoring Device

24. Remote Health Monitoring Using IoT

25. IoT-Based Smart Parking System

26. Home Energy Monitoring With IoT

27. IoT Fire Alarm System

28. IoT-Enabled Gas Leak Detector

29. Intelligent Waste Bin Sensor

30. IoT Smart Refrigerator

31. IoT-Based Smart Lighting System

32. IoT-Connected Vehicle Tracking

- 33. IoT Environmental Monitoring for Agriculture
- 34. IoT-Based Street Lighting Automation
- 35. Smart Home Appliance Control With IoT
- 36. IoT-Based Smart Greenhouse System
- 37. Remote IoT Health Monitoring Platform
- 38. IoT Water Quality Monitoring Device
- 39. IoT-Powered Smart Classroom Automation
- 40. IoT-Based Temperature and Humidity Alert System

Domain: Industrial Electronics

- 41. Conveyor Belt Control System
- 42. Automated Production Line Monitoring
- 43. Motor Speed Controller Using Microcontroller
- 44. Industrial Temperature Monitoring System
- 45. Smart Factory Energy Management System
- 46. PLC-Based Bottle Filling Automation
- 47. Robotic Welding Arm Controller
- 48. Vibration Sensor for Machine Health Monitoring
- 49. Automated Sorting Machine for Factories
- 50. Industrial IoT Gateway for Monitoring
- 51. Smart Factory Lighting Automation

- 52. Automated Packaging Line Controller
- 53. Industrial Sensor Data Logger
- 54. PLC-Based Conveyor Sorting System
- 55. Automated Inventory Management in Industry
- 56. Motor Fault Detection System
- 57. Machine Condition Monitoring System
- 58. Industrial Temperature and Humidity Control
- 59. Robotic Conveyor Arm for Material Handling
- 60. Smart Factory Energy Consumption Dashboard

Domain: Robotics Hardware

- 61. Line Following Robot
- 62. Obstacle Avoidance Robot
- 63. Pick-and-Place Robotic Arm
- 64. Automated Delivery Robot
- 65. Humanoid Robot Prototype
- 66. Vision-Based Navigation Robot
- 67. Surveillance Drone Hardware
- 68. Autonomous Ground Vehicle
- 69. Swarm Robotics Demonstration Kit
- 70. Robotic Hand Prosthetic

71. Gesture-Controlled Robotic Rover
72. Robotic Arm With Force Feedback
73. Autonomous Maze Solving Robot
74. Robotic Vacuum Cleaner Prototype
75. Smart Robotic Assistant for Home
76. Robot With AI-Based Object Recognition
77. Teleoperated Robotic Arm
78. Robotic Hand for Industrial Automation
79. Humanoid Robot With Voice Interaction
80. Mobile Robot With Obstacle Detection

Domain: Renewable Energy & Power Electronics

81. Solar-Powered Battery Charger
82. Wind Energy Monitoring System
83. Smart Grid Energy Controller
84. Solar Tracking System
85. Micro-Hydro Power Generator
86. Battery Management System for Solar
87. Energy Harvesting Circuit Using Piezoelectric Sensors
88. Hybrid Solar-Wind Energy Controller
89. MPPT-Based Solar Controller

90. EV Battery Charging Controller
91. Solar-Powered Water Pump Controller
92. Energy-Efficient Lighting Controller
93. Renewable Energy Storage System
94. Battery Health Monitoring System
95. Smart Energy Meter for Solar Systems
96. Solar Inverter With Remote Monitoring
97. Hybrid Renewable Energy Dashboard
98. Microcontroller-Based Wind Turbine Controller
99. Smart Solar-Powered Street Light System
100. Energy Management System for Microgrids

