

Embedded Systems Projects

I. *Embedded based ANDROID Mobile Systems*

1. Smart android home automation system (**IEEE 2014**).
2. ABASH — Android based smart home monitoring using wireless sensors (**IEEE 2014**).
3. Systolic blood pressure estimation using Android smart phones (**IEEE 2014**).
4. Enhancing User Privacy on Android Mobile Devices via Permissions Removal (**IEEE 2014**).
5. An Approach for Object Detection in Android Device (**IEEE 2014**).

II. *Embedded based BIOMETRIC and BIO-MEDICAL Systems*

1. A Proxy-Based Authentication and Billing Scheme with Incentive-Aware Multi hop Forwarding for Vehicular Networks (**IEEE 2014**).
2. Extended Grouping of RFID Tags Based on Resolvable Transversal Designs (**IEEE 2014**).
3. Design of Sensing System and Anticipative Behavior for Human Following of Mobile Robots (**IEEE 2014**).
4. Advanced security and privacy in connected vehicles (**IEEE 2014**).
5. Patient health management system using e-health monitoring architecture (**IEEE 2014**).
6. The design and development of a wearable posture monitoring vest (**IEEE 2014**).
7. A hybrid technique for License Plate Recognition based on feature selection of wavelet transform and artificial neural network (**IEEE 2014**).
8. Design of multiple sensors monitoring system using small flying vehicle (**IEEE 2014**).

III. Embedded based Mobile communication(GSM, GPS, GPRS)

1. GPS and GSM for Accident Spot Identification (**IEEE 2014**).
2. A low-cost extendable framework for embedded smart car system. (**IEEE 2014**).
3. Design and development of GPS/GSM based vehicle tracking and alert system for commercial inter-city buses (**IEEE 2014**).
4. GSM/Mobile/Cell Phone Based Device Monitoring and Control System (**IEEE 2014**).
5. A Proposal for an Agricultural Irrigation Control System Based on Support Vector Machine (**IEEE 2014**).
6. GSM based automatic energy meter reading system with instant billing (**IEEE 2014**).
7. Microcontroller and voice based alerting system for blind people with GPS enabled location identification (**IEEE 2014**).
8. GPS based office cab monitoring system very useful for the safety of female employees. This system records the travel path and location with timings. Also records the destination of each employee home (**IEEE 2014**).
9. Design and implementation of vehicle tracking system using GPS/GSM/GPRS technology and smart phone application (**IEEE 2014**).

IV. Embedded based WIRELESS Systems

1. Wireless DC Motor Speed and Direction Control using RF Communication (**IEEE 2014**).
2. Bluetooth based Wireless Device control for Industrial Atomization (**IEEE 2014**).
3. Bluetooth based Robot Control for Metal Detection Applications (**IEEE 2014**).
4. Design and development of remote-operated multi direction Unmanned Ground Vehicle (UGV). (**IEEE 2014**).
5. Application of Zigbee for Pollution Monitoring Caused by Automobile Exhaust Gases (**IEEE 2014**).

6. Transformer oil & heat level monitoring and intimation to EB through wireless system. **(IEEE 2014).**
7. Electrical apparatus control system in a plant using RF wireless communication. **(IEEE 2014).**
8. Temperature Monitoring In Wireless Sensor Network Using Zigbee Transceiver Module **(IEEE 2014).**

V. Embedded based ROBOTICS

1. Vision Based Robotic System for Military Applications and Design and Real Time Validation. **(IEEE 2014).**
2. GSM Controlled Robotics **(IEEE 2014).**
3. A game for robot operation training in search and rescue missions **(IEEE 2014).**
4. Surveillance system with light sensor **(IEEE 2014).**
5. Design and development of GSM Controlling Robot by SMS **(IEEE 2014).**
6. Dynamic wireless sensor networks for real time safeguard of workers exposed to physical agents in constructions sites **(IEEE 2014).**
7. AMBUBOT: Ambulance robot Automated External Defibrillator robotic ambulance **(IEEE 2014).**
8. Design of an intelligent security robot for collision free navigation applications **(IEEE 2014).**
9. Identification of an Interacting Person Through Playful Interaction With a Small Robot **(IEEE 2014).**
10. Robo-Tic: Development of a Tick-Eliminating Robot **(IEEE 2014).**
11. A Gesture Learning Interface for Simulated Robot Path Shaping With a Human Teacher **(IEEE 2014).**

VI. *Embedded based SENSORS*

1. Heart beat with RF indication (**IEEE 2014**).
2. Temperature level monitoring and automatic control in boiler (**IEEE 2014**).
3. Wireless based detection of CO2 level for industrial application (**IEEE 2014**).
4. Application of Integrate Sensor in Gas Alert System of Coal Mine (**IEEE 2014**).
5. Vehicle safety system with fuel and alcohol detection and indication (**IEEE 2014**).
6. Energy Efficient Environment Monitoring System Based on the IEEE 802.15.4 Standard for Low Cost Requirements (**IEEE 2014**).
7. CO and CO2 monitoring in vehicle (**IEEE 2014**).
8. Greenhouse management (**IEEE 2014**).
9. Wireless Black Box Using MEMS Accelerometer and GPS Tracking for Accidental Monitoring Of Vehicles (**IEEE 2014**).
10. Safety auto brake system for hill station vehicle using MEMS sensor. (**IEEE 2014**).
11. Gesture Based Operating System Control (**IEEE 2014**).
12. A water content sensor for baked products (**IEEE 2014**).

VII. *Embedded based RADIO FREQUENCY*

1. Vehicle safety system & signboard monitoring using RF technology (**IEEE 2014**).
2. Fast and Accurate Estimation of RFID Tags (**IEEE 2014**).
3. Smart RFID Antenna System for Indoor Tracking and Behavior Analysis of Small Animals in Colony Cages (**IEEE 2014**).
4. Extended Grouping of RFID Tags Based on Resolvable Transversal Designs (**IEEE 2014**).

VIII. *Embedded based ENERGY MANAGEMENT Systems*

1. Self-powered 30 μ W-to-10mW piezoelectric energy-harvesting system with 9.09ms/V maximum power point tracking time (**IEEE 2014**).
2. PDMS Micro cantilever-Based Flow Sensor Integration For Lab-On-A-Chip (**IEEE 2014**).
3. A Novel Current Sensor for Home Energy Use Monitoring (**IEEE 2014**).
4. Piezoelectric Vibratory-Cantilever Force Sensors and Axial Sensitivity (**IEEE 2014**).
5. Analysis for Individual Triaxial Tactile Sensing (**IEEE 2014**).
6. A Model for the Optimization of the Maintenance Support Organization for Offshore Wind Farms (**IEEE 2014**).
7. Integration and Operation of a Single-Phase Bidirectional Inverter with Two Buck/Boost MPPTs for DC-Distribution Applications (**IEEE 2014**).
8. Energy Management for Hybrid Generation Systems (**IEEE 2014**).
9. Design of Power Consumption Control System (**IEEE 2014**).
10. Smart Charge: Cutting the Electricity Bill in Smart Homes with Energy (**IEEE 2014**).
11. Energy performance of interior Light system (**IEEE 2014**).

IX. *Embedded based AUTO MOBILES*

1. A Probabilistic Framework for Decision-Making in Collision Avoidance Systems. (**IEEE 2014**).
2. Safety-Message Broadcast in Vehicular Ad Hoc Networks Based on Protocol Sequences (**IEEE 2014**).
3. Coordinated Control of Motor-Driven Power Steering Torque Overlay and Differential Braking for Emergency Driving Support (**IEEE 2014**).

4. Utilizing Microscopic Traffic and Weather Data to Analyze Real-Time Crash Patterns in the Context of Active Traffic Management. **(IEEE 2014)**.

X. *Embedded based SECURITY Systems*

1. Location-aware contents distribution platform based on Probe Vehicle Systems **(IEEE 2014)**.
2. Adaptive Sparse Representations for Video Anomaly Detection **(IEEE 2014)**.
3. 3. Direct Antenna Modulation (DAM) for Enhanced Capacity Performance of Near-Field Communication (NFC) Link **(IEEE 2014)**.

XI. *Embedded based ARDUINO*

1. Home automation project based on arduino. **(IEEE 2014)**.
2. Conditional privacy preserving security protocol for NFC applications(ATM) using arduino. **(IEEE 2014)**.
3. Coupled Mobile Phone Platform with Peak Flow Meter Enables Real-Time Lung Function Assessment using arduino. **(IEEE 2014)**.
4. Arduino based Online Monitoring of Geological CO₂ Storage and Leakage Based on Wireless Sensor Networks. **(IEEE 2014)**.
5. Arduino based intelligent helmet for coal miners. **(IEEE 2014)**.
6. Blind path identification using arduino. **(IEEE 2014)**.
7. Arduino based heart beat and temperature measurement of human in Bio-medical application. **(IEEE 2014)**.
8. Measure CO and CO₂ gases in car security system using arduino. **(IEEE 2014)**.

XII. Embedded based IMAGE PROCESSING

1. Robotic Explosive Charging in Mining and Construction Applications (**IEEE 2014**).
2. A novel hand segmentation method for multiple-hand gesture recognition system under complex background (**IEEE 2014**).
3. Design of Greenhouse Temperature Detection System Based on Linear Offset Interference (**IEEE 2014**).
4. Simplified MAP Detector for Binary Fingerprinting Code Embedded by Spread Spectrum Watermarking Scheme (**IEEE 2014**).
5. Hardware Architecture for Video Authentication Using Sensor Pattern Noise (**IEEE 2014**).