SSN College of Engineering

Department of ECE

List of project titles for student internal funding 2023 - 24

S.No	Proposed Titles for Student Internal Funding 2023-2024	Domain
1	Lombard speech synthesis based navigational helmet	Speech signal processing
2	Lombard speech synthesis for PA systems	Speech signal processing
3	Smart notice boards (various activities) through speech	Speech signal processing
4	Speech enabled general help desk @ SSN	Speech signal processing
5	Personalized synthetic voice communication tool	Speech signal processing
6	Smart Parking System	Internet of Things (IoT), Artificial Intelligence (AI) and Sensors
7	An Image Descriptor for Visually Challenged People	Internet of Things (IoT), Artificial Intelligence (AI) and Sensors
8	Electrical Fault Diagnosis of Industrial Machines	Internet of Things (IoT), Artificial Intelligence (AI) and Sensors
9	On the use of Federated learning in a Cell-free distributed D2D communication network for radio resource allocation and interference management.	Wireless Communications
10	IoT-based smart aquarium	IoT
11	Surveillance System using Computer Vision	Image Processing, ML
12	Early Detection of Weevils in Coconut Plantations	IoT
13	A TinyML based Solution for Smart Agriculture	Embedded Systems. ML
14	Safety for paragliders based on atmospheric pressure prediction and monitoring using IoT	IoT
15	Traffic Management System using Computer vision to detect congestion and emergency vehicles.	IoT
16	Adaptive Traffic system based on Traffic Density	IoT
17	Weather monitoring system for Smart rooftop Gardening	IoT
18	Wearable sensor-based monitoring respiratory rate during moderate exercise	Signal Processing
19	Charging IoT devices using footsteps	Electronics
20	To extract text from bottle labels using Image stitching techniques.	Image Processing
21	Prediction of Remaining Useful Time for EV-battery health monitoring	Embedded systems, Sensor design
22	Sensors enabled Assistive systems	Embedded systems, Sensor design
23	Design of biosensors in THz regime	Embedded systems, Sensor design
24	Pollution monitoring and detection in green campus (SSNCE) using IOT through APP development	IOT, Vehicular adhoc networks, RFID, Cryptography and network security
25	Implementation of IOT with RFID based tracking system in the garment production process	IOT, Vehicular adhoc networks, RFID, Cryptography and network security
26	Fabric and product Defect Detection Using Vision-Based Tactile Sensor	IOT, Vehicular adhoc networks, RFID, Cryptography and network security
27	Warning App development for road safety in autonomous vehicles	IOT, Vehicular adhoc networks, RFID, Cryptography and network security
28	Forewarning of Goat Diseases Diagnosis using IoMT to improve the Productivity and Economy of small and big farming	Wireless Sensor Network, IoT

29	Real time Water Quality Monitoring and Alert System for Thenpennai River	Wireless Sensor Network, IoT
30	Machine learning assisted antenna design for 5G applications	RF, antenna design, machine learning
31	Design and development of a portable heavy metal sensing system in aqeous media	Sensors, Electronics, IoT
32	Energy demand prediction for domestic using machine learning techniques	Machine learning, IoT
33	Handwritten Mathematical Expression Recognition from video lectures	Image Processing, Deep Learning
34	Develop a system to detect objects behind steel wall	Sensors, Signal processing
35	Design, Fabrication and Testing of an Antenna for RF Energy Harvesting and Data Transmitting	Antenna Design
36	Design, Fabrication and Testing of an Antenna for Biomedical Applications	Antenna Design
37	IoT based smart granary monitoring system	IoT
38	Character recognition system using deep learning model	Deep learning
39	Automated testing of product defects in textile industry using machine learning	Image processing
40	MULTIPLE INPUT MULTIPLE OUTPUT SYSTEM FOR 5 G COMMUNICATION	WIRELESS COMMUNICATION
41	Agriculture Field Monitoring with Sensor-Based Data Analysis Using Deep Learning Techniques	Deep Learning
42	An IoT Enabled Smart Farming System to Maximize the Farmer's Yield	IoT (Wireless Communication)
43	Antenna for 5G/6G wireless applications	RF, Microwave Engineering and Antenna Design
44	Microwave filters for 5G/6G applications	RF, Microwave Engineering and Antenna Design
45	DC to DC boost convertor for RF Energy harvesting systems.	RF, Microwave Engineering and Antenna Design