Govt. College of Engineering Chh. Sambhajinagar
Centre Of Excellence (Thinking Systems for sIgnal and Image Processing (TSSIP)

List of Problem Statement

The list of Problem Statements shall be supporeted for implementation interms of available resources and expertise.

1	AI-powered Face Recognition System
2	Object Detection and Tracking
3	Smart Surveillance System
4	AI-powered Image/Video Captioning
5	AI-based Video Streaming
6	AI-powered Autonomous Navigation
7	AI-based Robot Control
8	AI-enabled Gesture Control
9	AI-driven Obstacle Avoidance
10	Smart Home Automation
11	AI-based Healthcare Monitoring
12	AI-powered Chatbot
13	AI-based Speech Recognition
14	AI-powered Sentiment Analysis
15	RFID-Based Attendance System(Entire Dept.)
16	Smart Farming System
17	Fire Detection and Alert System
18	Motion Capture by High spedd camera and analysis
19	High-Speed Imaging
20	Ball-tracking-robot-using-raspberry-pi
21	Automatic Human Follower Trolley using Raspberry pi
22	Shock Wave Phenomena Analysis using High speed camera
23	Digital Image Correlation
24	Crop Health Assessment (Hyperspectral camera)
25	Yield Prediction (Hyperspectral camera)
26	Weed and Pest Detection (Hyperspectral camera)
27	Soil Analysis (Hyperspectral camera)
28	Precision Agriculture (Hyperspectral camera)
29	Water Quality Monitoring (Hyperspectral camera)
30	Vegetation Mapping and Analysis (Hyperspectral camera)
31	Pollution Detection (Hyperspectral camera)
32	Forest Monitoring (Hyperspectral camera)
33	Food Quality and Safety
34	Medical Diagnostics
35	Art Conservation
36	Forensic Science
37	Materials Science
38	Using hyperspectral data to differentiate between healthy and diseased tomato plants
39	area
40	potential mineral deposits

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List of Problem Statement

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41	health of coral reefs
42	spectral signatures
43	Hyperspectral imaging for earth observation
44	Thermal conductivity (Thermal Camera)
45	Investigate convection currents by visualizing the movement of heated air
46	Analyze heat loss from different surfaces and materials.
47	Emissivity and Reflectivity of infrared radiation by various surfaces
48	Navigation in low-visibility using thermal camera
49	Object detection and tracking using thermal camera
50	Thermoregulation Analysis
51	Water temperature monitoring through thermal camera
52	Crime scene investigations using thermal camera
53	Radiometric calibration transfer
54	LED, laser and light source metrology
55	Solar radiance and irradiance measurements
56	Solar simulator test and classification
57	Art & heritage analysis
58	Food & pharmaceuticals identification
59	Plastics identification
60	Remote sensing applications
61	Geology/Mining
62	Ground-truthing
63	Spectral remote sensing
64	Environmental and climate research
65	Crop and soil research
66	Vegetative studies
67	Forestry and canopy studies
68	Radiometric calibration transfer
69	Upwelling and downwelling measurement
70	Mineral Identification and Analysis in Mining Exploration
71	Alteration mapping
72	Core logging
73	Oil and gas exploration