SMART INDIA HACKATHON 2019
Problem Statements-Hardware

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S.No	Organization	Problem Statement Title	Category	Theme	Complexity
1	MSME Di Guwahati	Customizable sorting and packaging system	Hardware	Agriculture and Rural Development	Complex
2	MSME Di Guwahati	Customizable Tea Leaves plucking system	Hardware	Agriculture and Rural Development	Complicated
3	AICTE	Hardware - Agriculture and Rural Development	Hardware	Agriculture and Rural Development	Simple
4	Harman	OPTIMIZING WATER USAGE AND YIELD IMPROVEMENT	Hardware	Agriculture and Rural Development	Complicated
5	Sarda Dairy & Food Products Ltd.	Classification of quality of milk based on viscocity, color and density	Hardware	Agriculture and Rural Development	Complex
6	Marico	Coconut crop Harvest mechanization for reducing Harvest cost	Hardware	Agriculture and Rural Development	Complicated
7	Marico	Coconut to Copra Instant Yield Estimation	Hardware	Agriculture and Rural Development	Complicated
8	ANIK	Cattle feed manufacturing from local agriculture produce	Hardware	Agriculture and Rural Development	Complicated
9	ANIK	Ghee making machine	Hardware	Agriculture and Rural Development	Complicated
10	ANIK	Drought situations in rain shadow regions of Maharashtra	Hardware	Agriculture and Rural Development	Complicated
11	Cyient	Existing pumps in the farms to run by solar power	Hardware	Agriculture and Rural Development	Complicated
12	Cyient	Real Time Crop Health Monitoring	Hardware	Agriculture and Rural Development	Complicated
13	MSME-Development Organisation, Govt. of India, Ministry of MSME	Desalination of Sea Water to make Potable Water	Hardware	Clean Water	Complex
14	V3 Poly plast	Cost Effective Vitamin B12 Candle manufacturing for RO systems	Hardware	Clean Water	Complicated
15	Flucon	Solar operated portable water purifier	Hardware	Clean Water	Complex
16	Growtech Innovations	Monitoring input water quality and output water quality through smart sensing in Home water purifier	Hardware	Clean Water	Simple
17	MSME-DI, CHENNAI	Preventing letting out Polluted Water into Canals and Rivers	Hardware	Clean Water	Complicated
18	HCL TECHNOLOGIES LIMITED	Low cost residential flow meter	Hardware	Clean Water	Complex
19	KPIT	Generation of water from thin air	Hardware	Clean Water	Complicated
20	Thermax	Minimizing reject during water purification	Hardware	Clean Water	Complicated
21	M/s Sangwan Electrical (M)	Increasing performance of LED light drivers with consideration of its life span	Hardware	Energy / Renewable Energy	Complicated
22	S.K.LED Industries	Design and development of low cost 'Adsorbent chillers' for waste heat recovery	Hardware	Energy / Renewable Energy	Complicated
23	All Kerala Small Scale PVC pipe manufacturers association	Design of Environment Friendly Stabilizer for manufacture of PVC	Hardware	Energy / Renewable Energy	Complicated
24	AICTE	Hardware - Energy/ Renewable energy	Hardware	Energy / Renewable Energy	Simple
25	Consultant & Professor, DIT Universtiy, Dehradun	Automation and optimization of furnance parameters to reduce westage of raw materials	Hardware	Energy / Renewable Energy	Complex
26	Annant Enersol Pvt. Ltd.	Development of LED light fixtures for hot and dusty climate	Hardware	Energy / Renewable Energy	Complex
27	Thermax	Energy Storage Solutions using earth abundant materials	Hardware	Energy / Renewable Energy	Complicated

28	Indian Oil	Plug b/w petroleum products to avoid intermixing	Hardware	Energy / Renewable Energy	Complex
29	Indian Oil	Utilisation of CO2 emitted from MEG plant	Hardware	Energy / Renewable Energy	Complex
30	Indian Oil	Low-cost, high-accuracy lubricant testing kit	Hardware	Energy / Renewable Energy	Complex
31	Indian Oil	Low-cost production of Hydrogen	Hardware	Energy / Renewable Energy	Complex
32	Indian Oil	Innovative re-refining of used lubricating oils	Hardware	Energy / Renewable Energy	Complex
33	Indian Oil	Low-cost vapour recovery system at fuel stations	Hardware	Energy / Renewable Energy	Complex
34	Indian Oil	High-thermal efficiency gas burner	Hardware	Energy / Renewable Energy	Complex
35	Indian Oil	Design of proto-type Hydrogen storage tank	Hardware	Energy / Renewable Energy	Complex
36	Indian Oil	Lignin valorisation- Conversion to fuels,chemicals	Hardware	Energy / Renewable Energy	Complex
37	Kotak Mahindra Bank	Low cost payment terminal	Hardware	Finance	Complex
38	Sea Food Export Promotion Council	IoT based solution for monitoring of pollution through pesticide in fresh fruits and vegetable available in markets	Hardware	Food Technology	Simple
39	Bharat trader	Low cost Automation machine for making Roti, stuff Paratha.	Hardware	Food Technology	Simple
40	Bharat trader	Low cost Automation machine for making Karanjee, Modak, Ladoo and Samosa.	Hardware	Food Technology	Simple
41	Bajaj Electricals Limited	Multipan // NEKA	Hardware	Food Technology	Simple
42	Kisaan Industries, Haldwani	Fat preservation of Spices by Cryogenic grinding	Hardware	Food Technology	Complicated
43	Sea Food Export Promotion Council	Identification and control of heavy metals in the sea food material using an IoT solution	Hardware	Food Technology	Complicated
44	M/s Shubham Goldiee Masale Pvt. Ltd., Kanpur	Development of cost effective freeze and drying technology for vegetables/leaves.	Hardware	Food Technology	Complicated
45	MSME DEVELOPMENT INSTITUTE DELHI	Solution for Preventing workers from getting exposed to chemicals/fumes in Metal finishing/ Paint/ Cement units	Hardware	Healthcare & Biomedical Devices	Complicated
46	AICTE	Hardware - Healthcare & Biomedical Devices	Hardware	Healthcare & Biomedical Devices	Simple
47	Triple Plus Solution, Raipur	Hyperthermic Intraperitoneal Chemotherapy Machine	Hardware	Healthcare & Biomedical Devices	Complex
48	M/s.Vighnharta	Sound Efficient Pulse Jet Technology Alternatives	Hardware	Healthcare & Biomedical Devices	Complex
49	Himalyan Chamber of Commerce	Automated Foreign Particle Identification in the Liquid Drugs (Pharma Application)	Hardware	Healthcare & Biomedical Devices	Complicated
50	Marico	Non-Invasive, 24-h Digital Blood Glucose Monitoring Device	Hardware	Healthcare & Biomedical Devices	Complicated
51	Shantha - Sanofi	Simplification of garment scanning	Hardware	Healthcare & Biomedical Devices	Complicated
52	GE Healthcare	The Right Dose for the patient	Hardware	Healthcare & Biomedical Devices	Complex
53	GE Healthcare	Continuous Non-Invasive Blood Pressure (NIBP) Meas	Hardware	Healthcare & Biomedical Devices	Complex
54	GE Healthcare	Robust/Affordable fetal heart monitoring	Hardware	Healthcare & Biomedical Devices	Complex
55	DELL EMC	Ultra-Low power Nano implantable devices for early cardiac arrest detection	Hardware	Healthcare & Biomedical Devices	Simple
56	Dept of Atomic Energy	Aid-kit for persons with smell sense disability	Hardware	Healthcare & Biomedical Devices	Complicated
57	Cyient	Intravenous Infusion Monitoring	Hardware	Healthcare & Biomedical Devices	Complicated

58	Apollo Hospitals	7. 7. TeleScreening 60 mts HealthCheck @ Work P	Hardware	Healthcare & Biomedical Devices	Complex
59	Apollo Hospitals	6. Single strip estimation of multiple parameter	Hardware	Healthcare & Biomedical Devices	Simple
60	Apollo Hospitals	Smart recording of Hand Washing by Hospital staff	Hardware	Healthcare & Biomedical Devices	Complicated
61	Aurobindo Pharma	Effluent Analysis for Anti-Biotic Presence	Hardware	Life Sciences	Complicated
62	Bharat trader	Low cost Automatic Dishwasher Machine	Hardware	Miscellaneous	Simple
63	BRM Engineering solutions , Hyderabad Ltd.	Design and development of LED monitor panels to increase its ruggedness	Hardware	Miscellaneous	Complex
64	S.K.LED Industries	Management of heat dissipation for LED bulbs to increas life span	Hardware	Miscellaneous	Complicated
65	BRM Engineering solutions , Hyderabad Ltd.	Design of portable device to measure the flow of fluid without being in physical contact for finding flow measurement and leak detection	Hardware	Miscellaneous	Complex
66	M/s Macsian Apparels Pvt ltd.	Solution for Fabric length reader, cutter and Fabric digital printer	Hardware	Miscellaneous	Complex
67	AICTE	Hardware - Miscellaneous	Hardware	Miscellaneous	Simple
68	Bajaj Electricals Limited	To have Self Charged Fans - Cost effective , Energy saving and very useful for end user // FAN	Hardware	Miscellaneous	Simple
69	Bajaj Electricals Limited	Water Efficient – Air Cooler	Hardware	Miscellaneous	Complex
70	Coal India Limited	Mine Accident Rescue Operation	Hardware	Miscellaneous	Complex
71	CITD, Hyderabad	CNC Machine Noise Prediction and Reduction	Hardware	Miscellaneous	Complicated
72	CITD, Hyderabad	Component weight detection system for CNC machines	Hardware	Miscellaneous	Simple
73	CITD, Hyderabad	Cost effective Predictive Maintenance System for CNC machines	Hardware	Miscellaneous	Complicated
74	MSME-TC, Okhla, New Delhi	Simulation based building/structure strength testing	Hardware	Miscellaneous	Complex
75	Omech India Pvt. Ltd., Aurangabad	Alarm and interlocking system for level indication for inert gas and nitrogen cylinders.	Hardware	Miscellaneous	Simple
76	M/s Kashyap Brothers, Kanpu	Hardware solution to solve the problem of voltage unbalance, surge problems, power factor distortion etc.	Hardware	Miscellaneous	Complex
77	Usha Fisheries, Bemetara	Innovative solution for Fish Feeding System	Hardware	Miscellaneous	Simple
78	Kumbakonam Stainless steel utensils and Equipments Manufacturers Association	Solution to Overcome difficulties in polishing of stainless steel utensils	Hardware	Miscellaneous	Complicated
79	Shree Sita Refiners Pvt. Ltd., Durg	development of Low cost testing of Edible oils	Hardware	Miscellaneous	Complex
80	Kalp Stone, Mahasamund	Robotic assistance to cut the stones of given accurate dimensions	Hardware	Miscellaneous	Complicated
81	MSME-DI, CHENNAI	Detection of Defects in Leather	Hardware	Miscellaneous	Complex
82	Garden Reach Shipbuilders	Repeated failure of main Engine Control systems Cards due to short circuit or less insulation values	Hardware	Miscellaneous	Simple
83	Marico	Body Odor Detection attachment for Smartphone	Hardware	Miscellaneous	Simple
84	Marico	Ultra-Portable Cosmetic Heating Solution	Hardware	Miscellaneous	Complicated
85	Shree Cement Ltd	Counting of cement bags in loaded truck	Hardware	Miscellaneous	Complex
86	Oil India Ltd	Mechanism for Crude Oil Wax Handling in Pig Barrel	Hardware	Miscellaneous	Complex
87	Oil India Ltd	Sludge developed inside Crude Oil Transport Pipe	Hardware	Miscellaneous	Complex

88	Ministry of Textiles	POLLUTION CONTROL IN TEXTILE PROCESSING INDUSTRY	Hardware	Miscellaneous	Complicated
89	Cyient	Snap Design were it can with stand 100N pull force	Hardware	Miscellaneous	Complex
90	Cyient	WheelChair cum Stretcher	Hardware	Miscellaneous	Complicated
91	Cyient	Inductor in Integrated Circuits	Hardware	Miscellaneous	Complicated
92	VMware Software India Pvt	Smart eco-friendly garbage management	Hardware	Miscellaneous	Complex
93	M/s eastern Home Industries	Cost Effective Carpet Drying System	Hardware	Robotics & Drones	Simple
94	AICTE	Hardware - Robotics and Drones	Hardware	Robotics & Drones	Simple
95	Axiscades	Control of multiple drones with one control unit	Hardware	Robotics & Drones	Complex
96	Triple Plus Solution, Raipur	Robotic assistance for workers to paint the ceilings	Hardware	Robotics & Drones	Complicated
97	Himalyan Chamber of Commerce	Development of Drone for fixing High Tension wire in hilly terrain/rivers	Hardware	Robotics & Drones	Complicated
98	Gail (India) Ltd	Gas Dehydration for Pipeline Transportation	Hardware	Robotics & Drones	Complex
99	Shree Cement Ltd	Measuring quantity of cement and clinker	Hardware	Robotics & Drones	Complicated
100	Adani Group	robotic instrument to gauage tube thickness	Hardware	Robotics & Drones	Complex
101	Infosys	Building Inspection & Monitoring	Hardware	Robotics & Drones	Complex
102	Apollo Hospitals	4. Automated intelligent humanoid robot in ICU	Hardware	Robotics & Drones	Complex
103	Apollo Hospitals	2. Handholding Robots for deployment in Apollo Hos	Hardware	Robotics & Drones	Complex
104	Vanderlande	MarkingByDrone	Hardware	Robotics & Drones	Complicated
105	Vanderlande	Telepicking Interface with item picking Robotics	Hardware	Robotics & Drones	Complicated
106	M/s Sparr Electronics Ltd., Bangalore	Portable handheld optical character recogniser	Hardware	Security & Surveillance	Complex
107	AICTE	Hardware - Security and Surveillance	Hardware	Security & Surveillance	Simple
108	Coal India Limited	Fuel Tank Guard	Hardware	Security & Surveillance	Complex
109	Aurobindo Pharma	High end Access Control Systems	Hardware	Security & Surveillance	Simple
110	Oil India Ltd	Pipeline Pilferage Prevention & Detection system	Hardware	Security & Surveillance	Complex
111	AICTE	Hardware - Smart Cities	Hardware	Smart Cities	Simple
112	M/s Uniq Power Solutions Bangalore	Battery bank remote sensing, controlling &maintenance.	Hardware	Smart Communication	Complex
113	AICTE	Hardware - Smart Communication	Hardware	Smart Communication	Simple
114	Coal India Limited	IOT Device for Tracking CSR Assets	Hardware	Smart Communication	Complex
115	Coal India Limited	Automatic alert to Safety Officers	Hardware	Smart Communication	Complex
116	Manohar glass works	Automation	Hardware	Smart Communication	Complicated
117	Himalyan Chamber of Commerce	Road traffic management system for hilly terrains areas	Hardware	Smart Communication	Complicated

118	Plezmo	Create a Visually programmable PLC controller using Bluetooth Automation I/O Profile	Hardware	Smart Communication	Complex
119	Ministry of Railways	Public address System	Hardware	Smart Communication	Simple
120	Hindustan Unilever Ltd	Smart Demand Predictors	Hardware	smart communication	Complex
121	Ministry of Power	Smart monitoring and operating the power system	Hardware	Smart Communication	Complex
122	Maruti Suzuki India Ltd.	Live AQI (Air quality Index) Map like Google traffice map for the use of various stakeholders (Car Drivers,OEMs, individuals etc.)	Hardware	Smart Communication	Complex
123	NALCO	Finished Goods DISPATCH BAY Mnagement Automation	Hardware	Smart Communication	Complex
124	GoldmanSachs	Smart Traffic Lights using CCTV	Hardware	Smart Communication	Complicated
125	AICTE	Hardware - Smart Textiles	Hardware	Smart Textiles	Simple
126	MSME DEVELOPMENT INSTITUTE DELHI	Portable light weight wheel chair	Hardware	Smart Vehicles	Complicated
127	MSME-Development Organisation, Govt. of India, Ministry of MSME	Creating prototype of electric two wheeler for reducing traffic noise & road congestion	Hardware	Smart Vehicles	Complex
128	AICTE	Hardware - Smart Vehicles	Hardware	Smart Vehicles	Simple
129	BEML	Electric Drive System for Excavators for Inner City Applications	Hardware	Smart Vehicles	Complex
130	Coal India Limited	Heavy Earth Moving Machinery Monitoring	Hardware	Smart Vehicles	Complex
131	Consultant & Professor, DIT Universtiy, Dehradun	Hydrogen as fuel in Automobiles	Hardware	Smart Vehicles	Complex
132	Himalyan Chamber of Commerce	Truck Weighing based on the suspension of the vehicle	Hardware	Smart Vehicles	Complicated
133	ADIRE-Smart Village, Jahangirabad, Cuttack	Development of Solar energy powered service delivery vehicle	Hardware	Smart Vehicles	Complex
134	Garden Reach Shipbuilders	Autonomous navigation system for pilotless manoeuvring of vessel through restricted waters.	Hardware	Smart Vehicles	Simple
135	KPIT	Economical and reusable Thermal Management of components in electrical transport systems.	Hardware	Smart Vehicles	Simple
136	KPIT	Automatic Pothole detection while driving	Hardware	Smart Vehicles	Complicated
137	Tata Motors	Intelligent trip management for Electric Vehicles	Hardware	Smart Vehicles	Complex
138	Tata Motors	Vehicle Consumables Prognostics	Hardware	Smart Vehicles	Complicated
139	Tata Motors	An Open sourced Motor Controller for Hybrid Veh.	Hardware	Smart Vehicles	Complex
140	Cyient	Motor Vehicle Emission Reduction	Hardware	Smart Vehicles	Complex
141	Maruti Suzuki India Ltd.	Stop Noise pollution from honking	Hardware	Smart Vehicles	Complex
142	Min. of Road Transport	Electronic Payment of User Fees at theToll Plazas	Hardware	Software - Mobile App development	Simple
143	BEML	Transfer of data across two separate networks without violating cyber security	Hardware	Software - Web App development	Complicated
144	AICTE	Hardware - Sports and Fitness	Hardware	Sports and Fitness	Simple
145	Garden Reach Shipbuilders	Insulation issue in Auxiliary and Deck machinery motors in naval ships	Hardware	Students Innovation	Simple
146	AICTE	Hardware - Sustainable Environment	Hardware	Sustainable Environment	Simple
147	MSME DEVELOPMENT INSTITUTE DELHI	Recovery of metals from Industrial waste	Hardware	Waste Management	Complex

148	MSME DEVELOPMENT INSTITUTE DELHI	Cost effective waste water treatment for micro & small units	Hardware	Waste Management	Simple
149	M/s Laxmi Business Cement Co. (P) Ltd, P.O. & Village- Morangi, Distt.-Hazaribagh(Jharkhand)-825301	Solution to improve Dust Catching System in Mini Cement Plant / Raw material grinding facilities	Hardware	Waste Management	Complicated
150	Sadanand umberwadekar	Cost Effective Fume and Dust Cleansing System	Hardware	Waste Management	Complicated
151	President Laghu Udyog Bharati, Pindwada (Sirohi)	Design of tools and exhaust system to assist workers in stone industries	Hardware	Waste Management	Complicated
152	Himalyan Chamber of Commerce	Low cost smart dust bins for Office	Hardware	Waste Management	Simple
153	Shree Cement Ltd	Method of separating waste from limestone	Hardware	Waste Management	Complicated
154	KPIT	Use of plastic to construct roads	Hardware	Waste Management	Complex
155	Thermax	Develop Innovative methods for treating Sewage	Hardware	Waste Management	Simple
156	Ministry of Textiles	SANITATION	Hardware	Waste Management	Simple
157	Cyient	Household waste Incinerator	Hardware	Waste Management	Complex
158	Cognizant	Ocean Cleaning	Hardware	Waste Management	Complicated
159	Chaittanya Enterprise	Automatic machine for making cloth bags	Hardware	Waste Management	Complicated