Smart India Hackathon 2019 Problem Statements

# 1. Innovative Payment and Recovery System for MSME

Organisation : Dharwad Growth Inds Assn, Belur

Title : Innovative Payment and Recovery System for MSME

Category : Software

Technology : Smart Communication

Complexity : Simple

Youtube link :

#### Problem Statement Details

Description  
 MSME Samadhan Portal was introduced to tackle the issue of delay payments. But industrial units mention that even after registering the complains in the portal, the recovery of delay payments from third party remains a major cause of concern.  
Created At  
20th November , 2018  
Updated At  
 21st November , 2018

# 2. Medical Infrastructure Management by Scheduling visits and online access

Organisation : NKSSIA, Hubli

Title : Medical Infrastructure Management by Scheduling visits and online access

Category : Software

Technology : Healthcare & Biomedical Devices

Complexity : Simple

Youtube link :

#### Problem Statement Details

Description  
 The ESI/ESIC hospitals are few in numbers across the state and other alternatives are not very common near the industrial estates. Hence, planning and infrastructure ideas are needed to provide urgent and improved medical service near to the industrial estates. Alternative arrangements like local dispensaries or timely visits of recommended doctors and availability of health services should be taken into consideration  
Created At  
20th November , 2018  
Updated At  
 21st November , 2018

# 3. Development of Manufacturing Execution System(MES) for the Medical Device Industry

Organisation : Hills2Home

Title : Development of Manufacturing Execution System(MES) for the Medical Device Industry

Category : Software

Technology : Healthcare & Biomedical Devices

Complexity : Complicated

Youtube link :

#### Problem Statement Details

Description  
 Manufacturing Execution System (MES) solutions have the potential to generate efficiencies, improve productivity, and simplify compliance within the medical device manufacturing industry. Used to manage production activities, this class of software typically provides the ability to schedule activity, deliver instructions to operators, synchronize manual activities with automated processes, and integrate with manufacturing computer systems to enable quality control, deviation management and effective enterprise resource planning (ERP), equipment management, and the documenting of floor activities for monitoring and reporting purposes....MES technology enables the replacement of paper documentation with computerized records, known as electronic device history records (EDHRs), which can be accessed in real-time by all users  
Created At  
20th November , 2018  
Updated At  
 20th November , 2018

# 4. Automatic signalling in railways

Organisation : Sara Sae Private Limited

Title : Automatic signalling in railways

Category : Software

Technology : Smart Communication

Complexity : Complicated

Youtube link :

#### Problem Statement Details

Description  
 Electronic Interlocking with centralized operation of points and signals should be provided to eliminate human failure and to replace old mechanical systems. Centralized Traffic Control (CTC) System will help in real time monitoring and better management of trains. It provides for remote operation of signals from the centralized traffic control office  
Created At  
20th November , 2018  
Updated At  
 20th November , 2018

# 5. Hydrogen as fuel in Automobiles

Organisation : Consultant & Professor, DIT Universtiy, Dehradun

Title : Hydrogen as fuel in Automobiles

Category : Hardware

Technology : Smart Vehicles

Complexity : Complex

Youtube link :

#### Problem Statement Details

Description  
 A fuel cell-powered vehicle with an engine powered by compressed hydrogen, is like any other electric vehicle but uses hydrogen instead of a large, heavy battery for energy. These innovative vehicles are considered much safer than regular gasoline-powered automobiles. Rather than noxious, poisonous exhaust, a fuel cell vehicle emits only water vapor  
Created At  
20th November , 2018  
Updated At  
 20th November , 2018

# 6. Online Virtual Exibition Platform

Organisation : Consultant & Professor, DIT Universtiy, Dehradun

Title : Online Virtual Exibition Platform

Category : Software

Technology : Miscellaneous

Complexity : Complicated

Youtube link :

#### Problem Statement Details

Description  
 Virtual Exhibition platform brings traditional exhibitions to digital era. Virtual exhibition offers a solution for exhibitors and businesses to attract and contact customers, investor and suppliers cost effectively via internet in 3D environment MSMEs can set up their own stand or even build their own showroom. They can easily distribute product brochures in electronic form, display slide show and video presentations, or even bring their own product as a virtual 3D model for viewing. The space allows for a more affordable attendance at fairs, including fairs that you may not have the resources to attend otherwise.  
Created At  
20th November , 2018  
Updated At  
 20th November , 2018

# 7. Automation and optimization of furnance parameters to reduce westage of raw materials

Organisation : Consultant & Professor, DIT Universtiy, Dehradun

Title : Automation and optimization of furnance parameters to reduce westage of raw materials

Category : Hardware

Technology : Renewable Energy

Complexity : Complex

Youtube link :

#### Problem Statement Details

Description  
 The Grid Automation System is a programmable intelligent electronic device (IED) with PMU capability designed to simplify substation automation while improving measurement visibility. Since full substation automation relies on substation integration, the terms are often used interchangeably. Power-system automation includes processes associated with generation and delivery of power. Monitoring and control of power delivery systems in the substation and on the pole reduce the occurrence of outages and shorten the duration of outages that do occur. The IEDs communications protocols, and communications methods, work together as a system to perform power-system automation. The term “power system” describes the collection of devices that make up the physical systems that generate, transmit, and distribute power  
Created At  
20th November , 2018  
Updated At  
 20th November , 2018

# 8. Automation

Organisation : Manohar glass works

Title : Automation

Category : Hardware

Technology : Smart Communication

Complexity : Complicated

Youtube link :

#### Problem Statement Details

Description  
 •Several continuous furnaces need automation for improvement in overall efficiency, presently all furnace parameters are operated/controlled manually resulting in wastage of raw materials, energy and other resources. Upgrading to new technologies with auto controlled parameters help reduce overall losses and life of the furnace can also be improved.  
Created At  
20th November , 2018  
Updated At  
 20th November , 2018

# 9. Privacy Management System in Drones Data Collection

Organisation : CITD, Hyderabad

Title : Privacy Management System in Drones Data Collection

Category : Software

Technology : Robotics & Drones

Complexity : Complicated

Youtube link :

#### Problem Statement Details

Description  
 Description: Privacy means different things to different people, but flying drones with cameras, scanners, and sensors give nefarious people far more capabilities than ever before as they can easily gather information from Drone by using wireless technologies which is dangerous. Hence Privacy rules need to be incorporated in the operating system of the Drone so that information carried by Drone will be safer, which the major challenge  
Created At  
20th November , 2018  
Updated At  
 20th November , 2018

# 10. Intrusion detection and Recovery system for Drone Signals

Organisation : CITD, Hyderabad

Title : Intrusion detection and Recovery system for Drone Signals

Category : Software

Technology : Robotics & Drones

Complexity : Simple

Youtube link :

#### Problem Statement Details

Description  
 "signals are far from perfect. If a signal is lost, hacked, or hijacked, the drone must either return home or be removed from danger which is the biggest challenge."  
Created At  
20th November , 2018  
Updated At  
 20th November , 2018

# 11. Black Box Logging system for Drones

Organisation : CITD, Hyderabad

Title : Black Box Logging system for Drones

Category : Software

Technology : Robotics & Drones

Complexity : Complicated

Youtube link :

#### Problem Statement Details

Description  
 During fly time whenever a drone crashes, it is impossible to get information about the place and reason for crash  
Created At  
20th November , 2018  
Updated At  
 20th November , 2018

# 12. Autonomous Drones Disaster identification and alerting system

Organisation : CITD, Hyderabad

Title : Autonomous Drones Disaster identification and alerting system

Category : Software

Technology : Robotics & Drones

Complexity : Simple

Youtube link :

#### Problem Statement Details

Description  
 Drones will invariable fly into unusual situations, and whether it’s swarms of bees, bird attacks, lightning strikes, or signal jammers, they will need to alert operators of problems as soon as they arise  
Created At  
20th November , 2018  
Updated At  
 20th November , 2018

# 13. Sound Efficient Pulse Jet Technology Alternatives

Organisation : M/s.Vighnharta

Title : Sound Efficient Pulse Jet Technology Alternatives

Category : Hardware

Technology : Healthcare & Biomedical Devices

Complexity : Complex

Youtube link :

#### Problem Statement Details

Description  
 Currently the Pulse Jet based Technology makes a huge sound in thermal fogging machine, these are used to eradicate Mosquitoes by fogging chemicals. This sound is around 100 dB. Hence, they would like the Sound Engineering, Material Engineering & Mechanical Engineering Wings to work together with them to bring the sound level down to 60 to 65 dB.  
Created At  
20th November , 2018  
Updated At  
 20th November , 2018

# 14. CNC Machine Noise Prediction and Reduction

Organisation : CITD, Hyderabad

Title : CNC Machine Noise Prediction and Reduction

Category : Hardware

Technology : Miscellaneous

Complexity : Complicated

Youtube link :

#### Problem Statement Details

Description  
 Description:When machining process is running on CNC Bed, the noise levels are high at some times. This might be due to unrelated cutting parameters on workpiece set by operators. A device/system to predict from decibel level noise &vibration of machine and mounting structure of machine.  
Created At  
20th November , 2018  
Updated At  
 20th November , 2018

# 15. Component weight detection system for CNC machines

Organisation : CITD, Hyderabad

Title : Component weight detection system for CNC machines

Category : Hardware

Technology : Miscellaneous

Complexity : Simple

Youtube link :

#### Problem Statement Details

Description  
 Description:The Working Component is needs to be loaded on CNC machine for machining operation. Sometimes Operator unable to identify the weight of component before loading on to CNC working Bed. If any additional setup for Device to predict weight of loading component on to the machine. This will avoid the unexpected damage to machine.  
Created At  
20th November , 2018  
Updated At  
 20th November , 2018

# 16. Cost effective Predictive Maintenance System for CNC machines

Organisation : CITD, Hyderabad

Title : Cost effective Predictive Maintenance System for CNC machines

Category : Hardware

Technology : Miscellaneous

Complexity : Complicated

Youtube link :

#### Problem Statement Details

Description  
 Description:CNC machine contains many working parts. These parts regularly need to observe functional working requirement. In order to reduce the breakdown time of machine and annual maintenance cost the machine, a system/Device need to design& fabricate for monitoring such issues.  
Created At  
20th November , 2018  
Updated At  
 20th November , 2018

# 17. Simulation based building/structure strength testing

Organisation : MSME-TC, Okhla, New Delhi

Title : Simulation based building/structure strength testing

Category : Hardware

Technology : Miscellaneous

Complexity : Complex

Youtube link :

#### Problem Statement Details

Description  
 As per prevailing pattern, we are testing the strength of the building/structure by core cutting methods in our laboratories only. If this can be upgraded to non-destructive method like X-Ray/use of sensors etc., then it may save time cost and it can be done at the sites too rather than building the material to laboratory.  
Created At  
20th November , 2018  
Updated At  
 20th November , 2018

# 18. Alarm and interlocking system for level indication for inert gas and nitrogen cylinders.

Organisation : Omech India Pvt. Ltd., Aurangabad

Title : Alarm and interlocking system for level indication for inert gas and nitrogen cylinders.

Category : Hardware

Technology : Miscellaneous

Complexity : Simple

Youtube link :

#### Problem Statement Details

Description  
 In existing setup there is no provision of level indication for inert gas and nitrogen cylinders  
Created At  
20th November , 2018  
Updated At  
 20th November , 2018

# 19. Power Consumption Monitoring and Recommendation System for Efficiency Improvement

Organisation : Sadanand umberwadekar

Title : Power Consumption Monitoring and Recommendation System for Efficiency Improvement

Category : Software

Technology : Renewable Energy

Complexity : Complicated

Youtube link :

#### Problem Statement Details

Description  
 There is a need for innovative and viable methods to reduce electricity consumption in industrial units. Innovative software-based solutions that could provide live information related to consumption of electricity by various machines within industry and suggest inefficient consumption by any particular machine etc. Methods for application of alternative sources of energy at industrial scale in a cost-effective way  
Created At  
20th November , 2018  
Updated At  
 20th November , 2018

# 20. Cost Effective Fume and Dust Cleansing System

Organisation : Sadanand umberwadekar

Title : Cost Effective Fume and Dust Cleansing System

Category : Hardware

Technology : Waste Management

Complexity : Complicated

Youtube link :

#### Problem Statement Details

Description  
 Methods should be developed so that the fumes released from chimneys get diluted before release in open air, making it less harmful and having a lower environmental impact. In addition, viable technology be developed to extract the carbon from fumes which could be used up in alternative ways. Also, the dust pollution caused during the manufacturing process needs to be tackled using novel ideas and technological innovation.  
Created At  
20th November , 2018  
Updated At  
 20th November , 2018

# 21. Fat preservation of Spices by Cryogenic grinding

Organisation : Kisaan Industries, Haldwani

Title : Fat preservation of Spices by Cryogenic grinding

Category : Hardware

Technology : Food Technology

Complexity : Complicated

Youtube link :

#### Problem Statement Details

Description  
 The fat content of spices poses problems of temperature rise and sieve clogging during grinding. Due to this temperature rise, spices lose a significant fraction of their volatile oil or flavouring components. Therefore, a cryogenic grinding system was designed and developed to cool the spices before feeding to the grinder and maintain the cryogenic temperature in the grinding zone  
Created At  
20th November , 2018  
Updated At  
 20th November , 2018

# 22. Identification and control of heavy metals in the sea food material using an IoT solution

Organisation : Sea Food Export Promotion Council

Title : Identification and control of heavy metals in the sea food material using an IoT solution

Category : Hardware

Technology : Food Technology

Complexity : Complicated

Youtube link :

#### Problem Statement Details

Description  
 High level Heavy metal (Pb , Hg, Cd) contamination is being noted in sea food material which is an important detrimental factor for export. A technology is to be identified to process the sea food that will reduce the high level Heavy Metal contamination.  
Created At  
20th November , 2018  
Updated At  
 20th November , 2018

# 23. Extracting Hardware Design Diagram parameters from digital copy

Organisation : DIC, Solan

Title : Extracting Hardware Design Diagram parameters from digital copy

Category : Software

Technology : Miscellaneous

Complexity : Complex

Youtube link :

#### Problem Statement Details

Description  
 Scanning hardware solutions for digitizing that the design of the products MSMEs does not have any accessible options through which they can preserve their design in digital form for future references. And being the smaller volume of products does not allow them to preserve the physical samples of the products. If customized technology solutions of scanning are available to them. It is possible to develop design database which will complete industry as whole.  
Created At  
20th November , 2018  
Updated At  
 20th November , 2018

# 24. Development of Website/App for building customer relationship management in regional language

Organisation : Solan Industrial Association, Solan

Title : Development of Website/App for building customer relationship management in regional language

Category : Software

Technology : Miscellaneous

Complexity : Simple

Youtube link :

#### Problem Statement Details

Description  
 CRM for MSMEs: Msmes have market accessibility constraints and it is difficult to reach the right buyers. Many of MSMEs go through a struggling phase to acquire customers. A Customers relationship management based soft application in regional languages will help MSMEs to create loyal customer base.  
Created At  
20th November , 2018  
Updated At  
 20th November , 2018

# 25. Design of system for solving the issue of counterfeit problem.

Organisation : Solan Industrial Association, Solan

Title : Design of system for solving the issue of counterfeit problem.

Category : Software

Technology : Miscellaneous

Complexity : Simple

Youtube link :

#### Problem Statement Details

Description  
 The counterfeit problem (IPR Issues) the traditional msmes are struggling with many factors, one of major factor is that counterfeit products being sold on the name of traditional msmes products such as Kullu Shawl. A mechanism needs to be derived using technologies to ensure the entry barriers and vigilance of such counterfeit products, which holds Graphical Index (GI) which will create positive effects in increasing the share of MSMEs.  
Created At  
20th November , 2018  
Updated At  
 20th November , 2018

# 26. Development of Website/ App for improving skills and development of workers

Organisation : DIC, Solan

Title : Development of Website/ App for improving skills and development of workers

Category : Software

Technology : Miscellaneous

Complexity : Simple

Youtube link :

#### Problem Statement Details

Description  
 Interactive Audio-Visual training material for soft/ other skills and development of customized self-power projector which could be used in far flung, rural areas. The MSME and KVIC industries have incomparable technical skills, where as they face a problem and various other activities such as quality, planning, marketing, business development, use of computers, customer handling etc. There are many soft skills that need to be trained and for the same interactive training material and hard technology to present the same will strengthen the rural MSMEs.  
Created At  
20th November , 2018  
Updated At  
 20th November , 2018

# 27. Development of Website/APP for collection, transporation,disposal and segregation of waste products

Organisation : Nagar Nigam Jaipur, Govt. of Rajasthan

Title : Development of Website/APP for collection, transporation,disposal and segregation of waste products

Category : Software

Technology : Waste Management

Complexity : Complicated

Youtube link :

#### Problem Statement Details

Description  
 There is no organized and scientifically planned process for collection, transportation, disposal and segregation of Industrial waste. Disposal and segregation takes places under very unsafe and hazardous condition. Industrial waste is usually directly disposed on low lying area in routine way violating the practices of sanitary land filling. Unscientific dumping and disposal is prone to contamination of ground water and surface water, greenhouse gases, air pollution due to bad odour of the waste and health related problems. To overcome these problems, we wish to find out suitable technologies/mechanism and IT based monitoring for systematic and fool proof industrial waste disposal system.  
Created At  
20th November , 2018  
Updated At  
 20th November , 2018

# 28. Design of tools and exhaust system to assist workers in stone industries

Organisation : President Laghu Udyog Bharati, Pindwada (Sirohi)

Title : Design of tools and exhaust system to assist workers in stone industries

Category : Hardware

Technology : Waste Management

Complexity : Complicated

Youtube link :

#### Problem Statement Details

Description  
 During cutting and carving of marble/articles in stone industries dust pollution is very high. We wish to develop special tooling’s, exhaust systems etc so that the level of the dust in the working area may be reduced and health issues of the workers are addressed to  
Created At  
20th November , 2018  
Updated At  
 20th November , 2018

# 29. Development of LED light fixtures for hot and dusty climate

Organisation : Annant Enersol Pvt. Ltd.

Title : Development of LED light fixtures for hot and dusty climate

Category : Hardware

Technology : Renewable Energy

Complexity : Complex

Youtube link :

#### Problem Statement Details

Description  
 Energy efficient LED light are commonly and widely used in most of the industries where climate is hot, humid and dusty, this make the life of LED very short. If specially designed fixtures to protect the LEDs are developed the life of LEDs can be increased.  
Created At  
20th November , 2018  
Updated At  
 20th November , 2018

# 30. Online mechanism to monitor the working of embroidery machine

Organisation : Rajdhani Technology

Title : Online mechanism to monitor the working of embroidery machine

Category : Software

Technology : Security & Surveillance

Complexity : Complicated

Youtube link :

#### Problem Statement Details

Description  
 The embroidery machines are run almost 24 hours a day and several machines are controlled by a limited number of operators. Due to overworking the operators are sometime over speed the process of embroidery to increase their productivity but this create a problem of frequent breakdowns and lack of quality. To avoid this some vigilant and monitoring system are required to check the malpractices by the operators.  
Created At  
20th November , 2018  
Updated At  
 20th November , 2018

# 31. Development of cost effective freeze and drying technology for vegetables/leaves.

Organisation : M/s Shubham Goldiee Masale Pvt. Ltd., Kanpur

Title : Development of cost effective freeze and drying technology for vegetables/leaves.

Category : Hardware

Technology : Food Technology

Complexity : Complex

Youtube link :

#### Problem Statement Details

Description  
 India ranks 2nd in world in the vegetable production. Green vegetable/leaves are mostly seasonal; they are not available throughout the year. Dehydration is one of the preservation methods to preserve these seasonal varieties because 80% of green vegetable/leaves are not consumed and are thrown in the form of garbage. In India sun drying, solar drying, electric/oil fired dryer are commonly used to dry these products. In these methods sensory quality of the product is reduced. The taste and flavour of product varies a lot from natural product. Now a day freeze drying technology is available in the country which is beyond the limit of MSMEs because of its higher cost. Efforts may be made to develop low cost technology ensuring natural taste and affordable for MSMEs.  
Created At  
20th November , 2018  
Updated At  
 20th November , 2018

# 32. Hardware solution to solve the problem of voltage unbalance, surge problems, power factor distortion etc.

Organisation : M/s Kashyap Brothers, Kanpu

Title : Hardware solution to solve the problem of voltage unbalance, surge problems, power factor distortion etc.

Category : Hardware

Technology : Miscellaneous

Complexity : Complex

Youtube link :

#### Problem Statement Details

Description  
 Butt welding and spot welding machines are used to joint two pieces of metal together such as pipe, flanges, framework in factories. Normally such machines use single Ø or two Ø AC input. Usage of single Ø or two Ø in the machine result in voltage unbalance, surge problems, power factor distortion etc. There is requirement of the technology to avoid phase unbalance arising out of usage of these machine in shop floor...Availability of such technology can be helpful to maintain the phase distortion/unbalance in the supply network easing the DISCOM to maintain uninterrupted power supply and loss of revenue. The technology will also reduce the energy charges to MSMEs.  
Created At  
20th November , 2018  
Updated At  
 20th November , 2018

# 33. Robotic assistance for workers to paint the ceilings

Organisation : Triple Plus Solution, Raipur

Title : Robotic assistance for workers to paint the ceilings

Category : Hardware

Technology : Robotics & Drones

Complexity : Complicated

Youtube link :

#### Problem Statement Details

Description  
 The most difficult place to plaster paints are the ceilings, as the work there is against gravity. Worker finds it tedious to work because of the height. Workers need quick mobility with height and reach to the ceiling. So, metal extension legs are suggested which the labourers can wear and reach the ceiling along with the required movement and mobility around the room area. These are to be made of metal for durability and rough use at the same time being affordable for mass construction projects.  
Created At  
20th November , 2018  
Updated At  
 20th November , 2018

# 34. Classification of quality of milk based on viscocity, color and density

Organisation : Sarda Dairy & Food Products Ltd.

Title : Classification of quality of milk based on viscocity, color and density

Category : Hardware

Technology : Agriculture and Rural Development

Complexity : Complex

Youtube link :

#### Problem Statement Details

Description  
 In most cooperative dairies the collection is done at various collection points. With the recognition of A1/A2 quality milk the separation of the milk at source becomes important else there is a mix-up of the milk at the source itself. Technology is required to separate the milk at the source itself based on the quality. A quick inexpensive equipment is needed to find out the milk quality and segregate it accordingly.  
Created At  
20th November , 2018  
Updated At  
 20th November , 2018

# 35. Innovative solution for Fish Feeding System

Organisation : Usha Fisheries, Bemetara

Title : Innovative solution for Fish Feeding System

Category : Hardware

Technology : Miscellaneous

Complexity : Simple

Youtube link :

#### Problem Statement Details

Description  
 Fish in the hatcheries are sold by weight. For making the fish gain weight the fish need to swim(exercise) especially when the feed (expensive item in fisheries) is provided which is thrown at specific place in the pond randomly. The problem is how to distribute the fish feed around the pond and develop such device that feed should be evenly distributed in pond which will enable the fish to swim across the pond to gain maximum weight.  
Created At  
20th November , 2018  
Updated At  
 20th November , 2018

# 36. Leather Article Design software (Mobile App) for small entrepreneurs

Organisation : Himalyan Chamber of Commerce

Title : Leather Article Design software (Mobile App) for small entrepreneurs

Category : Software

Technology : Miscellaneous

Complexity : Simple

Youtube link :

#### Problem Statement Details

Description  
 It is always left to individual craft person to physically try proto types for leather articles and then implement accordingly. If a simple design software/mobile app can be developed that will help the small entrepreneurs to come with new, innovative designs for the leather article manufactures.  
Created At  
20th November , 2018  
Updated At  
 20th November , 2018

# 37. Road traffic management system for hilly terrains areas

Organisation : Himalyan Chamber of Commerce

Title : Road traffic management system for hilly terrains areas

Category : Hardware

Technology : Smart Communication

Complexity : Complicated

Youtube link :

#### Problem Statement Details

Description  
 In the hilly terrains trees falling is natural phenomenon, also river/canals overflowing in season always disturb the free movement of traffic. These incidents block the roads for several hours. Authorities are always informed much later and precious hours are spent on the roads by public. To avoid this an IOT enabled system which give the real time information to concerned authority and the blockage can be cleared at the earliest or detour/diversion of traffic can be done at the minimum time without creating the traffic jams in the above cases.  
Created At  
20th November , 2018  
Updated At  
 20th November , 2018

# 38. Low cost smart dust bins for Office

Organisation : Himalyan Chamber of Commerce

Title : Low cost smart dust bins for Office

Category : Hardware

Technology : Waste Management

Complexity : Simple

Youtube link :

#### Problem Statement Details

Description  
 Under the Swatch Bharath mission we should have all the government offices fitted with these low cost (less than Rs 2000) smart bins which should have anti-theft mechanism and should inform the labour with SMS when the bin is full.  
Created At  
20th November , 2018  
Updated At  
 20th November , 2018

# 39. Development of Drone for fixing High Tension wire in hilly terrain/rivers

Organisation : Himalyan Chamber of Commerce

Title : Development of Drone for fixing High Tension wire in hilly terrain/rivers

Category : Hardware

Technology : Robotics & Drones

Complexity : Complicated

Youtube link :

#### Problem Statement Details

Description  
 It is always a challenging job for electrician to fix the high-tension wires in the hill area, if Drone can be used from one poll to another poll for handling the wires it will reduce the human labour and increase the efficiency. The same can be used to for river crossing high tension wires/lines.  
Created At  
20th November , 2018  
Updated At  
 20th November , 2018

# 40. Automated Foreign Particle Identification in the Liquid Drugs (Pharma Application)

Organisation : Himalyan Chamber of Commerce

Title : Automated Foreign Particle Identification in the Liquid Drugs (Pharma Application)

Category : Hardware

Technology : Healthcare & Biomedical Devices

Complexity : Complicated

Youtube link :

#### Problem Statement Details

Description  
 As per the standards it is mandatory to check all the liquid drugs (Pharma Industry) through visual inspection for any other/foreign particle in the drug bottle, if this can be implemented through sensors observing the foreign particle in the conveyer belt and remove that bottle from shipment which will increase the quality/efficiency and reduce the manual labour.  
Created At  
20th November , 2018  
Updated At  
 20th November , 2018

# 41. Truck Weighing based on the suspension of the vehicle

Organisation : Himalyan Chamber of Commerce

Title : Truck Weighing based on the suspension of the vehicle

Category : Hardware

Technology : Smart Vehicles

Complexity : Complicated

Youtube link :

#### Problem Statement Details

Description  
 It is always found that trucks must go to the nearest weighing centre/yard to measure the weight of the truck on the load. If this system is inbuilt in the truck and displayed on the dashboard, how much load the truck carrying, which will reduce the weighing centres on the highway. The system should measure based on the displacement of the suspension in standstill and calculate the load on the vehicle by deducting the original vehicle weight.  
Created At  
20th November , 2018  
Updated At  
 20th November , 2018

# 42. Mobile App - Software Development for GST

Organisation : Chennai District Small Scale industries Association (CDISSIA)

Title : Mobile App - Software Development for GST

Category : Software

Technology : Miscellaneous

Complexity : Simple

Youtube link :

#### Problem Statement Details

Description  
 After the introduction of GST, MSMEs are facing hardship in filling the returns for GST, e-way bill etc. due to their computer illiteracy. Also, many of the MSMEs are not having computer system and operators to comply with its requirements. It is suggested to develop a user friendly mobile app which can be used by the MSMEs for the purpose.  
Created At  
20th November , 2018  
Updated At  
 20th November , 2018

# 43. Software platform for managing payment transactions of Employee

Organisation : Chennai District Small Scale industries Association (CDISSIA)

Title : Software platform for managing payment transactions of Employee

Category : Software

Technology : Miscellaneous

Complexity : Simple

Youtube link :

#### Problem Statement Details

Description  
 All the MSME are facing a tough challenge in maintaining ESI, PF, Pension Accounts for their employees as each of these are being maintained by different departments with different identification number for each employee. The MSMEs also must maintain separate account and make payment separately to each department. It is suggested to have one employee identification number through which all the payments can be made by a single cheque and Employee Identification Number (EIN) should be valid wherever the individual joins  
Created At  
20th November , 2018  
Updated At  
 20th November , 2018

# 44. Solution to Overcome difficulties in polishing of stainless steel utensils

Organisation : Kumbakonam Stainless steel utensils and Equipments Manufacturers Association

Title : Solution to Overcome difficulties in polishing of stainless steel utensils

Category : Hardware

Technology : Miscellaneous

Complexity : Complicated

Youtube link :

#### Problem Statement Details

Description  
 The stainless-steel utensils manufacture reported that they must do the polishing operation inside the utensils manually with some chemicals which is harmful to human and time-consuming process. If a suitable machine / mechanism is introduced for this process, they may save considerable man hours which leads to more productivity also the operation will not cause any health hazardous  
Created At  
20th November , 2018  
Updated At  
 20th November , 2018

# 45. development of Low cost testing of Edible oils

Organisation : Shree Sita Refiners Pvt. Ltd., Durg

Title : development of Low cost testing of Edible oils

Category : Hardware

Technology : Miscellaneous

Complexity : Complex

Youtube link :

#### Problem Statement Details

Description  
 In Chhattisgarh state there are enterprises engaged in production of edible oils. To meet the quality and composition standards, oil & food industries use certain oil parameters to maintain the quality. Several factors affect the edible oil quality such as seasonal conditions, ripening stage, harvesting and carriage systems, method and duration of storage, processing technology and it is determined by different analytical methods to assess the stability of oil and to avoid possible adulterations. Such testing facilities for edible oils may be made locally, so that SMEs can benefit.  
Created At  
20th November , 2018  
Updated At  
 20th November , 2018

# 46. Robotic assistance to cut the stones of given accurate dimensions

Organisation : Kalp Stone, Mahasamund

Title : Robotic assistance to cut the stones of given accurate dimensions

Category : Hardware

Technology : Miscellaneous

Complexity : Complicated

Youtube link :

#### Problem Statement Details

Description  
 In Mahasamund district of Chhattisgarh state there are approximately 200 enterprises (Micro & Small) engaged in stone cutting and polishing which are all facing similar problems in cutting of stone of accurate dimension (Length, Breadth & Thickness). In absence of low cost cutting machine they are unable to compete with tiles and marble industries. Low cost device to solve their problem can make them efficient by improving quality and output.  
Created At  
20th November , 2018  
Updated At  
 20th November , 2018

# 47. Development of Solar energy powered service delivery vehicle

Organisation : ADIRE-Smart Village, Jahangirabad, Cuttack

Title : Development of Solar energy powered service delivery vehicle

Category : Hardware

Technology : Smart Vehicles

Complexity : Complex

Youtube link :

#### Problem Statement Details

Description  
 Service delivery vehicle are in great demand now a day. These vehicles use high amount of fossil fuel. So, there is a need to replace this conventional source of energy to solar power which can be manufactured and used by MSMEs. Solar electric service delivery vehicle with wireless charging is also another approach which can help MSMEs  
Created At  
20th November , 2018  
Updated At  
 20th November , 2018

# 48. Identification of vacant land for industrial use

Organisation : Orissa Small Scale Industries Association, Cuttack(OSSIA)

Title : Identification of vacant land for industrial use

Category : Software

Technology : Miscellaneous

Complexity : Simple

Youtube link :

#### Problem Statement Details

Description  
 Land is an important factor for setting up of industrial units. Most of the existing and prospective entrepreneurs are facing problems in identifying the vacant land which can be put in use for industrial purposes. Though Government has set up industrial estates/industrial areas /sheds for this purpose, entrepreneurs often face a lot of problem to know about the status of vacant land. To address the issue, an app may be developed to locate the existing vacant land offered by the Government agencies with all information such as area, price, infrastructural facilities  
Created At  
20th November , 2018  
Updated At  
 20th November , 2018

# 49. Detection of Defects in Leather

Organisation : MSME-DI, CHENNAI

Title : Detection of Defects in Leather

Category : Hardware

Technology : Miscellaneous

Complexity : Complex

Youtube link :

#### Problem Statement Details

Description  
 Leathers are traded / sold out based on their cutting value. Cutting value of the leather is affected due to the defects in the skin/hide. Presently, most of the MSMEs detect the fault/defects by visual inspection. There is a possibility for error. So, a new technology may be developed to identify the defects in leather. Then the defect detection technology can be linked / merged with leather – CAD/CAM design software, so whenever the pattern cutting happens, the software itself automatically detect the defects and align the pattern accordingly  
Created At  
20th November , 2018  
Updated At  
 20th November , 2018

# 50. Forecasting the Demand for Water Pumps

Organisation : MSME-DI, CHENNAI

Title : Forecasting the Demand for Water Pumps

Category : Software

Technology : Smart Communication

Complexity : Complicated

Youtube link :

#### Problem Statement Details

Description  
 There are about 1000 MSMEs manufacturing water pumps of various types and capacities in Coimbatore. They manufacture the pumps based on the orders received from their dealers and customers. In this process, they get little time to plan and execute their orders. Hence it is suggested that the data available with the meteorological department about the forecasted groundwater table based on the rain received during the previous season in various regions can be made available to these MSMEs online. This data can be used by the MSMEs to plan their production quantity and capacity of the pumps for the next season.  
Created At  
20th November , 2018  
Updated At  
 20th November , 2018

# 51. Solution for Effective Utilization of Coir Raw Material to avoid wastage

Organisation : MSME-DI, CHENNAI

Title : Solution for Effective Utilization of Coir Raw Material to avoid wastage

Category : Software

Technology : Agriculture and Rural Development

Complexity : Simple

Youtube link :

#### Problem Statement Details

Description  
 The raw material for coir industry which comes from the coconut farms are spread over various states of India. The production is also seasonal. There is no data available which will provide the availability of raw material sources to the actual users i.e., the coir industries. If a linkage is made with real-time data, the wastage of raw material can be avoided and the cost of production of coir products can be reduced to a large extent.  
Created At  
20th November , 2018  
Updated At  
 20th November , 2018

# 52. Developing a user-friendly data bank of MSMEs

Organisation : MSME-DI, CHENNAI

Title : Developing a user-friendly data bank of MSMEs

Category : Software

Technology : Smart Communication

Complexity : Simple

Youtube link :

#### Problem Statement Details

Description  
 While implementing Public Procurement Policy (PPP), it is found that the MSMEs are not aware of the items required by the Public-Sector Enterprises (PSEs). At the same time, PSEs are not aware of the details of MSMEs which are manufacturing the items required by them. Under this scenario, developing of user-friendly databank, which will link the MSMEs and the PSEs is the need of the hour. Also details of SC / ST enterprises can be incorporated as a separate section for ready reference by the PSEs  
Created At  
20th November , 2018  
Updated At  
 20th November , 2018

# 53. Preventing letting out Polluted Water into Canals and Rivers

Organisation : MSME-DI, CHENNAI

Title : Preventing letting out Polluted Water into Canals and Rivers

Category : Hardware

Technology : Clean Water

Complexity : Complicated

Youtube link :

#### Problem Statement Details

Description  
 Several Effluent Treatment Plants (ETPs) have been set up in industrial clusters with a huge amount of government subsidy. Despite this, huge quantities of polluted water/acids are being discharged into rivers, canals, etc. A monitoring mechanism for the water used in industries for processing must be developed. Water audit of the water input/output from each industry which is using water for processing is to be developed. Mode of disposal / recycling of the sediments from ETPs are also to be monitored.  
Created At  
20th November , 2018  
Updated At  
 20th November , 2018

# 54. Body Odor Detection attachment for Smartphone

Organisation : Marico

Title : Body Odor Detection attachment for Smartphone

Category : Hardware

Technology : Miscellaneous

Complexity : Simple

Youtube link :

#### Problem Statement Details

Description  
 Our nose is so used to our own body odor that we can’t smell our own sweat. In order to avoid getting pointed out by others, the solution can be a portable sensor which can detect and convey the state of body odor and recommend corrective action.  
  
Sensors are available for detection of various volatile organic compounds (VOCs). Miniaturization of the sensors and fitting it as smartphone attachment- using any available mobile ports- for detection of body odor and algorithm to recommend the corrective action.  
  
What is needed: An ultra-portable and low-cost body odor measurement probe attachment for smartphone and accompanying application with following expectations-  
  
- Low Cost Attachment  
  
- Differentiate intensity and character of odor detected  
  
- Differentiate between fragrance and body odor (both are volatile compounds  
Created At  
15th November , 2018  
Updated At  
 17th November , 2018

# 55. Coconut crop Harvest mechanization for reducing Harvest cost

Organisation : Marico

Title : Coconut crop Harvest mechanization for reducing Harvest cost

Category : Hardware

Technology : Agriculture and Rural Development

Complexity : Complicated

Youtube link :

#### Problem Statement Details

Description  
 More than 1/3rd of the coconut farm cost consists of labour expenses. The major heads for the same are harvesting charges. Harvesting requires skilled set of labours and shortage of labour leads to higher cost and delay in harvesting. Also the number of trees that can be harvested manually remains a constraint.   
  
Previous innovations in this field like the coconut climbing machine has had limited success because the speed of operation becomes slow and there is unwillingness of the farmer to be a climber himself. Hence the problem remains unsolved.   
  
What is needed: A harvesting machine/mechanization which can be directed / controlled easily from ground without needing farmer / labour to climb the tree. Expectations from said mechanization -   
  
1. Accurate cutting and harvesting ability.  
  
2. Cost benefit vs Manual Climbing  
  
3. Low effort required to activate and use  
Created At  
15th November , 2018  
Updated At  
 17th November , 2018

# 56. Coconut to Copra Instant Yield Estimation

Organisation : Marico

Title : Coconut to Copra Instant Yield Estimation

Category : Hardware

Technology : Agriculture and Rural Development

Complexity : Complicated

Youtube link :

#### Problem Statement Details

Description  
 Coconut refers to coconut without husk that is normally available at Retail shops. Said coconut consists of Outer shell, Coconut meat (with 45-55% moisture) & water inside. Copra manufacturing from Coconut involves breaking of coconut, scooping and subsequent Sun Drying of coconut meat. The entire process takes around 6-7 days. Moisture of final copra (dried coconut meat) is around 5-6%. Copra Yield is defined as the amount of copra produced from 1 kg of coconut. Yield ranges from 23% to 34% and is key Parameter for defining Nut quality and Prices. (Yield many a times is referred as Outturn in coconut domain)   
  
One can estimate exact copra yield only after completion of entire drying operation. Samples getting mechanically dried instead of Sun drying can reduce the time for yield estimation but again it will still not allow Yield determination at time of Buying nuts. Also said process will be based upon sampling and subjected to friction between seller and buyer. Currently there is no way of estimating instant Yield at time of purchase.   
  
Inability to estimate the yield of copra is quite critical problem in the entire value change as either seller or Buyer suffer losses due to poor yield estimates at point of sale.   
  
What is needed - The need of the hour is a sampling / continuous testing machine (Non Invasive type) which can accurately estimate the yield of the coconut at point of purchase.  
Created At  
15th November , 2018  
Updated At  
 17th November , 2018

# 57. Leveraging Digital Solutions to solve for 10X growth in prescriptions

Organisation : Dr Reddy's Labs

Title : Leveraging Digital Solutions to solve for 10X growth in prescriptions

Category : Software

Technology : Healthcare & Biomedical Devices

Complexity : Complex

Youtube link :

#### Problem Statement Details

Description  
 Background:  
  
Indian market for pharmaceuticals is predominantly branded generics. Doctors write the brand name of the drug rather than the active ingredient name. (Eg. NISE instead of Nimesulide, or Crocin instead of Paracetamol). Apart from OTC (Over the Counter Drugs) a health care practitioner (Doctor) can only prescribe a medicine. Hence the end consumer is not the decision maker.  
  
To increase revenue all the pharmaceutical companies strive to get mind share of the doctor so that for a particular drug their brand is at the top of the evoked set. It is against the law to provide any direct inducement to the doctor to prescribe a certain brand.  
  
Hence, pharmaceutical companies send Medical Representatives (MR) to the doctor frequently to ensure the doctor is reminded of the brand / Brand Recall. Medical representatives also provide information to the doctors on new product launch, new packaging or other information about the brand. They also inform the doctor about the brand availability at the local pharmacy stores. There are multiple theories on why a doctor prescribes a certain brand. One theory is that doctor prescribes a brand because they trust the quality. Another theory is that they have a certain evoked set of brands and divides the prescriptions arbitrarily based on the brand that comes to their mind. Another theory is that doctor prescribes a brand because of personal working relationship or even in some cases out of sympathy due to general longer waiting time of MRs to meet him/her.  
  
Medical representative gets very small share of the doctor's time. Usually the interaction lasts from 30 seconds to 5 minutes. Medical representatives have to spend a lot of time waiting for the doctor's time or travelling from one clinic/hospital to another. Pharma companies have to employ a huge force of Medical Representatives to ensure reach to doctors. However, this is very expensive to scale up.  
  
  
  
Objective:  
  
To enable 10 X growth in prescriptions with digital technology as an enabler  
  
  
  
Guidance:  
  
• Solution should have measurable key performance indicators (KPI)  
  
• KPI should be clearly linked to the goal of generating prescriptions.  
  
• Solution should be scalable  
  
• No part of Solution should include any direct inducement to the doctor (Eg. Commission or direct material favours)  
  
• You might want to narrow down the problem into sub parts or address all separately. You can address one or more of the following :  
  
• Increasing the effectiveness of the Interaction between doctor and MR  
  
• Enabling the same MR team to reach more doctors  
  
• Enable reach to doctors without MR through digital means (Doctors not getting covered by MR visits)  
  
• At least one example of the experience journey should be provided in the solution where you provide the details of how your solution will change a day in life of the Doctor and a MR etc  
  
• The 10 X growth is kept as a framework so that that you don’t provide an incremental solution which cannot be scaled.  
Created At  
1st November , 2018  
Updated At  
 16th November , 2018

# 58. Leveraging data to solve for Non-communicable Disease diagnosis and healthcare delivery

Organisation : Dr Reddy's Labs

Title : Leveraging data to solve for Non-communicable Disease diagnosis and healthcare delivery

Category : Software

Technology : Healthcare & Biomedical Devices

Complexity : Complex

Youtube link :

#### Problem Statement Details

Description  
 Background:  
  
Non-communicable disease continues to be an important public health problem in India, being responsible for a major proportion of mortality and morbidity. Demographic changes, changes in the lifestyle along with increased rates of urbanization are the major reasons responsible for the tilt towards the non-communicable diseases. In India, there is no regular system for collecting data on non-communicable diseases (NCDs) which can be said to be of adequate coverage or quality. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3481705/  
  
  
  
While disease burden surveys from the likes of ICMR (Indian Council for Medical Research) do provide directional insights, bottom-up data is certainly more effective in making focused interventions.  
  
  
  
For instance, focused on cardio-vascular and diabetes, identification of prevalence and micro-segments of population at risk is critical to deliver care as these require specialist interventions, not easily available in the rural markets. These conditions also require the patients to be on long term care in terms of continuous parameter evaluation and management of the vital parameters. Better understanding of prevalence through early diagnosis and focused geographical/demographical views help deploy the sparse resources effectively – both by the public and private health institutions.   
  
Objective: How can a combination of UIDAI/Aadhaar, “Low fidelity high frequency” medical devices that can capture recurring diagnostic data at a high frequency come together to enable better data collection? How can advanced data analytics (ML/DL/AI) on top of this data platform help improve 10x, the diagnosis and intervention touch points for non-communicable diseases (NCD) focused on Cardio-Vascular and Diabetes, primarily in Rural/Semi-Urban environments?Guidance:  
  
• Solution should have measurable key performance indicators (KPI)  
  
• KPI should be clearly linked to the goal of improving the early diagnosis of these conditions as well as enable planners give access to the distribution of patient population  
  
• Note: Solution proposed should enable identification of patients to ensure the attributability and accuracy of the data but respect the data privacy of the patients  
  
• You might want to narrow down the problem into sub parts or address all separately. You can address one or more of the following :  
  
• Identify the diagnostic approach for common causes of diabetes and cardio-vascular diseases  
  
• Identify various common use-case data capture environments and leverage that to build data sets  
  
• ML/DL models that can creatively leverage varied data sets of demographics, climate, other conditions to progressively improve the diagnosis as well as disease distribution prediction  
  
• At least one example of the journey should be included in the solution where you provide the details of how your solution will operate/ change a day in life of a patient or a care-professional/planner  
  
• The 10 X for impact is kept as a framework so that that you don’t provide an incremental solution which cannot be scaled  
Created At  
1st November , 2018  
Updated At  
 16th November , 2018

# 59. Reducing phishing attacks in online/mobile wallets and net banking

Organisation : PayTM

Title : Reducing phishing attacks in online/mobile wallets and net banking

Category : Software

Technology : Security & Surveillance

Complexity : Complicated

Youtube link :

#### Problem Statement Details

Description  
 Phishing attacks are becoming common. The common man is sometimes duped of hard earned saving due to phishing attacks. Specially vulnerable are old people. They are targeted for their net banking/online wallet PIN or password. The developer should design a system to solve this problem. This problem cannot be solved using only technology. Special focus will have to be put on User Experience (UX) design and User Interface (UI) design. Solutions should keep in mind old users, users who are from villages, users who are not technically savvy and kids. These are specially vulnerable groups.  
Created At  
13th November , 2018  
Updated At  
 16th November , 2018

# 60. Using technology to create a credit profile of e-commerce customers

Organisation : PayTM

Title : Using technology to create a credit profile of e-commerce customers

Category : Software

Technology : Software - Mobile App development

Complexity : Complicated

Youtube link :

#### Problem Statement Details

Description  
 The e-commerce companies find it very difficult to profit since their are lot of return backs and cancellations in e-commerce orders. Also even when orders are properly accepted the customer may want to pay by EMI. Thus their needs to be a system to create a credit and buying profile of a customer. This has to be done in a way that it does not create privacy issue for the customer. The developer should use data from customers and try to use technologies like big data/AI/statistical analysis to create a profile of customer without compromising his or her privacy. Then based on that the system should give delivery benefits and EMI options to the user. So a customer who has negative buying profile will not get Cash on Delivery option. Similarly customers with negative credit profile will not get EMI options.  
Created At  
13th November , 2018  
Updated At  
 16th November , 2018

# 61. Reduce the amount of push notifications require for e-commerce apps

Organisation : PayTM

Title : Reduce the amount of push notifications require for e-commerce apps

Category : Software

Technology : Software - Mobile App development

Complexity : Complex

Youtube link :

#### Problem Statement Details

Description  
 Developer would have to build a solution using Artificial Intelligence or some other mechanism to reduce the amount of push notifications sent by e-commerce apps. Currently push notifications are generally sent based on a fixed schedule or some trigger in most apps. This creates multiple notifications every week and irritates the user. The intent should be to only send notifications when the users intent is there to purchase a particular product. Sending push notifications or emails without any user intent to buy that category of product creates frustration to the user. So only when user has intention to buy something the notifications or emails should. The developer has to use a technical method to find that intent using big data and then send notifications or emails according to that method.  
Created At  
13th November , 2018  
Updated At  
 16th November , 2018

# 62. Managing the personnel training in a simple way

Organisation : Shantha - Sanofi

Title : Managing the personnel training in a simple way

Category : Software

Technology : Software - Web App development

Complexity : Complicated

Youtube link :   
https://www.youtube.com/watch?v=7945zoe0G04&featur

#### Problem Statement Details

Description  
 In a GMP manufacturing organization with 2000+ employees, tracking employee training details is one of the key tasks. How to manually track the employee training details and alert the users through an excel spread sheet easily? We are in 21st Century & moving ahead with new trends of technology. Organizations need to keep their workforce up to speed with the latest trends & procedures. How to keep the skill set of the personnel as per the current requirements of GMP?  
Created At  
9th November , 2018  
Updated At  
 16th November , 2018

# 63. Affordable mobile application camera system to monitor residential societies' vehicle activity

Organisation : MixORG

Title : Affordable mobile application camera system to monitor residential societies' vehicle activity

Category : Software

Technology : Software - Mobile App development

Complexity : Simple

Youtube link :

#### Problem Statement Details

Description  
 Statement: Create an affordable solution of a mobile application and a camera system through image processing to identify and monitor vehicles entering and leaving a residential society passing through the entry/exit gate.  
  
  
  
Description: Many residential society administrations in India face an impending problem of illegal vehicle parking inside their societies and theft of the vehicles. This issue is not bounded to just vehicles, but also add to other security concerns inside the residential societies. Though there are solutions that exist in the market for monitoring through cameras and software system but are expensive and the affordability comes into the question. In this regard, we would like to have an affordable and innovative solution that caters to the Indian market.  
  
  
  
Expectation: For the team choosing this topic, we expect to have a working model (software system) of the solution wherein, when a vehicle passes through a residential society gate, it is identified as a resident / non resident vehicle and a notification to be sent to the vehicle owner and the security via a mobile application. Similarly on exit the vehicle is identified. The application may provide interesting features which improve the overall security of the resident society, convenience to residents and analytics to the security / management of the residential society.   
  
  
  
Note: For implementation students do not need to have a camera but could also rely on the pre recorded video. We will also provide at a later stage 1-2 videos to overcome the requirement of the physical camera.   
  
  
  
Evaluation criteria  
  
- Working demo : 40 points  
  
- Clean and easy to use interface: 30 points  
  
- Innovative features catering to convenience of residents and revenue generation for the application: 30 points  
Created At  
29th October , 2018  
Updated At  
 16th November , 2018

# 64. Low cost payment terminal

Organisation : Kotak Mahindra Bank

Title : Low cost payment terminal

Category : Hardware

Technology : Finance

Complexity : Complex

Youtube link :

#### Problem Statement Details

Description  
 Low cost payment terminal which can be used to accept ALL modes of digital payments (QR, Card, Contactless, Aadhaar) including transit payments for smart cities-India has higher penetration of phones then cards and any merchant payment solution should leverage this trend. Hence to drive Digital Transactions there is need for a payment acceptance platform that is Mobile Centric, Omnipresent, Cost Light, Secure, Network Resillient/Agnostic, Provides Instant Payments and can be Adopted at Scale by both Consumer and Merchants.   
  
Current POS terminal penetration is restricted to smaller base and there are inherent limitations which discourage mass adoption in Indian context. POS machines are becoming more advanced with Value Added Services but still the payment process has remained same and doesnt appeal to all segment of merchants especially ones which are cost sensitive and ones outside Tier-1 centers.  
  
India needs a solution that is not only cost effective but at par with convenience of Cash.  
  
It should support multiple scenarios seamlessly such as Ecommerce, Collection for small shops and high frequence-low ticket use cases such as transits.   
  
Focusing on Retail Merchants in Smart Cities, which still see a bulk of cash payments, there is a need for a low cost & multi-functional acceptance device that can support all existing Digital Payment Modes like Cards/UPI/BharatQR/Aadhaar Pay/IPG at fraction of current cost. There should be an ecosystem of players to drive the adoption at scale and to Tier-3+ centers.  
Created At  
16th November , 2018  
Updated At  
 16th November , 2018

# 65. Multi lingual and voice based conservation interface ( not necessarily bot)

Organisation : Kotak Mahindra Bank

Title : Multi lingual and voice based conservation interface ( not necessarily bot)

Category : Software

Technology : Smart Communication

Complexity : Complicated

Youtube link :

#### Problem Statement Details

Description  
 In everyday technological contexts, it is observed that, customers tend to engage more proficiently with a conversational user interface. Such interfaces, if smart, increases the customer satisfaction and improves the user experience. The objective is to design and develop a conversational interface that supports voice channel and accepts multilingual input. The model should leverage latest technological advancements including natural language processing, natural language generation, speech recognition and artificial intelligence. The interface should handle various banking related customer requests and extend other banking services. It should accept user’s voice input, process it and reply with appropriate voice output. The prototype can be a web interface or a mobile application interface.  
Created At  
16th November , 2018  
Updated At  
 16th November , 2018

# 66. Low cost residential flow meter

Organisation : HCL TECHNOLOGIES LIMITED

Title : Low cost residential flow meter

Category : Hardware

Technology : Clean Water

Complexity : Complex

Youtube link :   
https://www.youtube.com/watch?v=i\_bjs3-fvpQ

#### Problem Statement Details

Description  
 There is a need for strap-on low cost flow meter that can be used to meter water consumption in individual units in existing Apartments and buildings . This problem explain the need and requirements to create such a low cost flow meter. Please refer to you tube video for detail info  
Created At  
8th October , 2018  
Updated At  
 15th November , 2018

# 67. Performance Evaluation and Analysis of a vehicle

Organisation : ARAI

Title : Performance Evaluation and Analysis of a vehicle

Category : Software

Technology : Smart Communication

Complexity : Complex

Youtube link :   
https://www.youtube.com/watch?v=5QVMPZwGde8

#### Problem Statement Details

Description  
 Indian operation patterns and duty cycles are heterogeneous and complex and require huge experimentation to ensure durability and reliability of the vehicles. Robust methods and algorithms need to be developed to evaluate data which can be further used as input for new vehicle design and development.   
  
Participants shall use this data to come up with algorithms for post processing and further performance evaluation. Algorithms shall be generic in nature  
Created At  
15th November , 2018  
Updated At  
 15th November , 2018

# 68. Online Prognostic System of key vehicle component

Organisation : ARAI

Title : Online Prognostic System of key vehicle component

Category : Software

Technology : Smart Vehicles

Complexity : Simple

Youtube link :   
https://www.youtube.com/watch?v=GgfkGahPlxs

#### Problem Statement Details

Description  
 Accidents in heavy commercial vehicles occur mainly due to the failure of Drivetrain system, chassis, brakes and tires. To avoid breakdown of the above mentioned systems, the participants shall develop software algorithms for online prognostics to monitor the health of the above systems. The typical components that can be considered for the demonstration purposes are ‘Drive Shaft, Axle, Brakes and Tires’.  
Created At  
15th November , 2018  
Updated At  
 15th November , 2018

# 69. Ensure safe driving distance in adverse conditions

Organisation : ARAI

Title : Ensure safe driving distance in adverse conditions

Category : Software

Technology : Smart Vehicles

Complexity : Complex

Youtube link :   
https://www.youtube.com/watch?v=YvYlDlGf6QI&featur

#### Problem Statement Details

Description  
 Many of the frontal collisions on highways are due to slow response of drivers and not many systems are in place to warn the driver about an impending frontal collision. In addition to this, during adverse weather conditions the visibility gets affected, which affects the sensor and the system responses. The participants shall develop the system (architecture and software) using cost effective sensors to ensure safety of the host vehicle while driving on highways.  
Created At  
15th November , 2018  
Updated At  
 15th November , 2018

# 70. The Right Dose for the patient

Organisation : GE Healthcare

Title : The Right Dose for the patient

Category : Hardware

Technology : Healthcare & Biomedical Devices

Complexity : Complex

Youtube link :   
https://www.youtube.com/watch?v=SdrtYQIbKJ0

#### Problem Statement Details

Description  
 Background:  
  
Patients are often administered controlled dose of medication or contrast media during procedures such as emergency care, medical imaging or anesthesia delivery. The accuracy of administered dose is extremely critical from the perspectives of patient safety and/or diagnostic quality of images produced during these procedures. Fulfilling dose accuracy needs accurate measurement or estimation of the body weight of the patient while positioned on a surgical table or on a patient positioner of an imaging equipment such as CT scanner, MRI scanner or an interventional X-ray system.   
  
  
  
Most of the conventional surgical tables or patient positioners do not have an integrated weight sensing mechanism to aid dose computation. In situation where there may be an integrated weight sensing, the accuracy could be severely affected due to numerous variances induced by use of bed linen, sheathes or blankets, clothing & accessories, patient immobilization supports, respiratory tubes, IV lines or catheters etc.   
  
  
  
Problem Statement:  
  
Develop an integrated weight measurement system with an accuracy better than +/- 3% and suitable for patient types ranging from neonates to obese adults (3 – 280 kg) for patient positioner used with medical imaging systems or a surgical table to enable accurately defining the dose parameters for medication or contrast media. Other desirable characteristics of such a system are patient comfort, cleanability, lower cost and reliability and MRI system compatibility.  
Created At  
8th November , 2018  
Updated At  
 15th November , 2018

# 71. Automated Adverse Road Condition Detection

Organisation : ARAI

Title : Automated Adverse Road Condition Detection

Category : Software

Technology : Smart Communication

Complexity : Complex

Youtube link :   
https://www.youtube.com/watch?v=mCnfQnP\_iVA

#### Problem Statement Details

Description  
 The road conditions like pot holes, un marked speed breakers and oil spills shall be detected by a system using cost effective sensors like accelerometers, infra-red sensors, laser sensors, vision based sensors. The output shall be a system architecture and software algorithm for identification of the above road conditions.  
Created At  
15th November , 2018  
Updated At  
 15th November , 2018

# 72. Automatic Stream Changeover for Flow-metering

Organisation : Gail (India) Ltd

Title : Automatic Stream Changeover for Flow-metering

Category : Software

Technology : Software - Web App development

Complexity : Complex

Youtube link :   
https://www.youtube.com/watch?v=I88i57dzE0g

#### Problem Statement Details

Description  
 For measuring very low flow generally a small meter stream is added as standby. A system is required to be devised which checks the flow passing through the MAIN big metering stream and if the flow goes below a pre determined set point, automatically the Low flow stream is taken in line by opening its valves and subsequently closing the main big meter valves. System need to ensure that low flow meter has become online before closing the main meter valves.  
Created At  
29th October , 2018  
Updated At  
 15th November , 2018

# 73. AI powered Server Log Management Software

Organisation : Gail (India) Ltd

Title : AI powered Server Log Management Software

Category : Software

Technology : Software - Web App development

Complexity : Complex

Youtube link :   
https://www.youtube.com/watch?v=2JIEn4ZtIg4

#### Problem Statement Details

Description  
 The AI powered software solution should be automatically fetch error logs from servers / applications / databases and categorize/ segregate them based on severity and frequency. There should be dashboards for various types of logs. The solution should have capability to visit Google, Bing and relevant OEM support sites for searching KB for solving the errors mentioned in logs and suggest the relevant link as possible solutions. The target is 95% effectiveness in relevance of links.  
Created At  
29th October , 2018  
Updated At  
 15th November , 2018

# 74. Robust/Affordable fetal heart monitoring

Organisation : GE Healthcare

Title : Robust/Affordable fetal heart monitoring

Category : Hardware

Technology : Healthcare & Biomedical Devices

Complexity : Complex

Youtube link :   
https://www.youtube.com/watch?v=SdrtYQIbKJ0

#### Problem Statement Details

Description  
 Background:  
  
Approximately 6 lakh still births happen in India. Around 50% of them are during labor. Some still births can be prevented by monitoring fetal heart rate. Having this information can help the obstetric team take the appropriate steps during labor.   
  
  
  
Problem Statement:   
  
Develop a solution to accurately measure the frequency of an object of approx. size of 1 cm, placed at a distance (ranging 10 cm to 100cm), oscillating at 1 – 5 Hz.It should be affordable (<20$) and compact  
Created At  
8th November , 2018  
Updated At  
 13th November , 2018

# 75. Predictive analysis on Medicines & Doctors availability in Government hospitals

Organisation : DELL EMC

Title : Predictive analysis on Medicines & Doctors availability in Government hospitals

Category : Software

Technology : Healthcare & Biomedical Devices

Complexity : Simple

Youtube link :   
https://www.youtube.com/watch?v=B3aRkmV8Yvw

#### Problem Statement Details

Description  
 Development of a Healthcare Information system to provide predictive analysis on Medicines availability in Government hospitals & Predictive analysis on increasing the efficiency of the hospital by managing availability of doctors and specialists.  
  
  
  
Description:   
  
Government hospitals provides medicines for the treatment to the patients based on the diagnosis. During the peak time of a disease, some medicines are not available in the hospital. Based on patients historical and current data, system can generate a report on what all medicines should be available in the hospital and in what quantity at particular time and location of the hospital.  
  
  
  
Doctors and specialists availability needs to be managed as per the inflow of patients. Many times patients do not find the required doctor during the peak of a disease or shortage of doctors in a hospital. Based on patient inflow for a particular ailment or disease, historical data and current data, system could generate the requirement of number of doctors required in a hospital on daily basis and also during a peak of a disease. Many times, doctors are not available when patients needs them more, e.g. on weekends, holidays, evenings etc.  
  
  
  
• Target customer – Indian Government healthcare department  
  
• Use Analytics to bring in efficiency in Operational functioning  
  
• Specific use cases under purview of this program:  
  
– Predict Medicine availability in Government hospitals for a given time period (month, quarter etc.)  
  
– Predict number of doctors and specialists required during a given time period (month, quarter etc.)  
  
Features:  
  
• Browser and Map based reporting and analysis on  
  
• Medicine Usage   
  
• Inventory/Costing/Budgeting  
  
• Identify disease  
  
• Disease trending based on diagnosis  
  
• Health Program Implementation Initiative trackers  
  
• Increase the operational efficiency of patient treatment  
  
• Optimize utilization of specialists/experts  
  
• Contexts Search on diagnose, Medicines etc.  
  
• Increase efficiency of treatment/prescripription  
Created At  
12th November , 2018  
Updated At  
 12th November , 2018

# 76. Ultra-Low power Nano implantable devices for early cardiac arrest detection

Organisation : DELL EMC

Title : Ultra-Low power Nano implantable devices for early cardiac arrest detection

Category : Hardware

Technology : Healthcare & Biomedical Devices

Complexity : Simple

Youtube link :   
https://www.youtube.com/watch?v=9emAmwJ3vFw&featur

#### Problem Statement Details

Description  
 In general, usage of technology has tremendously increased in preventive healthcare.  
  
There is sufficient scope to develop devices and algorithms to detect symptoms between systole and diastole to conclude possible cardiac arrest. To provide the solution, student teams need to design and develop implantable device and concretely identify blood symptoms along with ECG data. The device should be capable to send real-time data and the receiver shall have the algorithms to interpret the data and suggest appropriate actions. There are 3 challenges: 1.Device has to be implantable into human body. 2. The device has to be real-time in nature with an ultra low power nano design to be available economically. 3.The algorithm has to be a trainable model to suit different types of symptoms.  
Created At  
12th November , 2018  
Updated At  
 12th November , 2018

# 77. MULTIPLE CITY PAIR SLOT ALLOCATION TO AIRLINES WITH RATIONALIZED BLOCK TIME

Organisation : Min. of Civil Aviation

Title : MULTIPLE CITY PAIR SLOT ALLOCATION TO AIRLINES WITH RATIONALIZED BLOCK TIME

Category : Software

Technology : Software - Web App development

Complexity : Complex

Youtube link :

#### Problem Statement Details

Description  
 Presently, the slot allocation process allocates departure slot at an airport. The airline then requests an arrival slot after due consideration of flying time, taxi out time & taxi in time at the destination airport. If the arrival slot is not available, the next available arrival slot is allotted, Based on slot availability, airport may allocate early slot resulting in shortfall in block time, thereby adding an artificial “balloon” to the total flight time.   
  
Slot allocation is done with respect to Gate out Time and Gate in Time for the respective City pair. The variable factors as shown in the last row are adjusted accordingly to meet the requirements of Gate out Time and Gate in Time (Total Block Time). However, the extra padding or buffer time which the airlines add, is based on historic data and not realistic. The airlines would accept the non-corresponding slot times (with their blocks) to allow the flights to be operated. The DGCA also allowed a 10 minute plus/minus window from the standard block time which creates additional variability. Major feature to include:  
  
i. Air traffic congestion and Delays to flights due to early arriving flights   
  
ii. Incorrect or inflated Block times  
  
iii Early departures from origin Airports  
  
iv Airlines accepting incorrect arrival slots at congested airports  
  
v Absence of Penal action for non-adherence of slots  
  
vi Seeking for an innovative solution  
  
The airlines will need to be engaged to disclose the optimal block time for each scheduled operation. Once the current data is obtained, the slot schedule needs to be “gamed” via slot swaps where possible and adjustments where necessary to develop an optimal slot schedule. Additional constraints that need to be considered include airline marketing/competitive issues and arrival/departure slot constraints at each airport. As stated above, the desired outcome is an optimized schedule that achieves the desired performance parameters and rationalize the timings.  
Created At  
6th November , 2018  
Updated At  
 12th November , 2018

# 78. Presenting Waypoints, Navigational Aids and creating ATS Route Network on the Google Earth Platform

Organisation : Min. of Civil Aviation

Title : Presenting Waypoints, Navigational Aids and creating ATS Route Network on the Google Earth Platform

Category : Software

Technology : Software - Web App development

Complexity : Complex

Youtube link :

#### Problem Statement Details

Description  
 The Airports Authority of India is the Air Navigation Service Provide for India. The AAI notifies various ATS routes on which different aircraft navigate for going from departure to destination. These routes are called ATS Routes and are defined using some imaginary point called waypoints and some real physical navigational aids called VORs and NDBs. The coordinates of these waypoints and navigational aids are available in ENR 4.1 and ENR 4.4 sections of a document called AIP (https://aim-india.aai.aero/eaip-v2/index-en-GB.html). Different ATS Routes are published in ENR 3.1 Section of the AIP.  
  
• What we want: These waypoints and navigational aids need to be visible on the Google Earth along connected through lines representing different ATS Routes.   
  
• Example: https://skyvector.com/  
Created At  
6th November , 2018  
Updated At  
 12th November , 2018

# 79. Presenting Aerodrome Obstacles around an Aerodrome

Organisation : Min. of Civil Aviation

Title : Presenting Aerodrome Obstacles around an Aerodrome

Category : Software

Technology : Software - Web App development

Complexity : Complex

Youtube link :

#### Problem Statement Details

Description  
 The obstacles around an aerodrome are very critical information for the flight crew. This information is published in AD 2.10 section in AIP.   
  
  
  
The different obstacles around an aerodrome to be placed on the Google Earth Platform along with their information (metadata) tagged.  
  
• Example: https://aisjapan.mlit.go.jp/html/Info/eTOD\_E.html  
Created At  
6th November , 2018  
Updated At  
 12th November , 2018

# 80. Counting of cement bags in loaded truck

Organisation : Shree Cement Ltd

Title : Counting of cement bags in loaded truck

Category : Hardware

Technology : Miscellaneous

Complexity : Complex

Youtube link :

#### Problem Statement Details

Description  
 How counting of cement bags can be done in a loaded cement truck. Before loading the bags it is manually counted and loaded however a system based recheck needs to be done to verify.  
Created At  
9th November , 2018  
Updated At  
 12th November , 2018

# 81. iVault

Organisation : FIS SOLUTIONS(INDIA)

Title : iVault

Category : Software

Technology : Finance

Complexity : Complex

Youtube link :   
https://www.youtube.com/

#### Problem Statement Details

Description  
 Registration information of property / vehicle is very crucial to identify current and previous ownership. In absence for secure way to validate chain of ownership, same property / vehicle can be fraudulently sold to multiple person. Similarly, we always want to keep records of financial transaction, communication in a way which cannot be manipulated and can be referenced in future. Hence there is need for system which allow creation of data which cannot be manipulated but can be extended  
Created At  
30th October , 2018  
Updated At  
 11th November , 2018

# 82. Chatbot for eGoverance

Organisation : FIS SOLUTIONS(INDIA)

Title : Chatbot for eGoverance

Category : Software

Technology : Software - Web App development

Complexity : Complex

Youtube link :   
https://www.youtube.com/

#### Problem Statement Details

Description  
 Mega bot (chatbot) which provides information related to all government sponsored loans/insurance schemes at single place. This interactive chatbot should be able to pull information from various sources like nabard, rbi, etc and should be able to assist the users with the relevant information.  
Created At  
30th October , 2018  
Updated At  
 11th November , 2018

# 83. eFramer

Organisation : FIS SOLUTIONS(INDIA)

Title : eFramer

Category : Software

Technology : Agriculture and Rural Development

Complexity : Simple

Youtube link :   
https://www.youtube.com/

#### Problem Statement Details

Description  
 Indian farmers face lot of problems when it comes to buying seeds & fertilizers from authorized channels at the right price. Same applies to selling the farm produce at the right price so that farming becomes profitable occupation. Need of an hour is to build a e-portal for farmers where-in they can buy seeds & fertilizers at the optimal price. This portal should also allow consumers to bid/ask for the farm produce thus eradicating middle man and benefiting both farmers and consumers.  
Created At  
30th October , 2018  
Updated At  
 11th November , 2018

# 84. Land Real estate Registration

Organisation : FIS SOLUTIONS(INDIA)

Title : Land Real estate Registration

Category : Software

Technology : Software - Web App development

Complexity : Complex

Youtube link :   
https://www.youtube.com/

#### Problem Statement Details

Description  
 Land/Real estate registration is corruption prone process which leads to lot of Benami transactions. Government tries it’s best to eradicate the malpractices, but it doesn’t yield fruitful result. One way to solve this problem is to use blockchain technology in order to capture all the Benami transactions related to Land/Real estate deals.  
Created At  
30th October , 2018  
Updated At  
 11th November , 2018

# 85. Block-chain based certificate validation

Organisation : Greefy Technologies

Title : Block-chain based certificate validation

Category : Software

Technology : Software - Web App development

Complexity : Simple

Youtube link :   
https://www.youtube.com/watch?v=8hXl8ormv7w&featur

#### Problem Statement Details

Description  
 Description:  
  
Storing the school/university/board certificates is a recurring process. For the Organization, verifying the authenticity of the certificates is tedious and cumbersome . The proposed solution will help the institutions to store the certificates in the decentralized way using the block-chain system and give access to any organizations or any institution with the consent of the individual using multi-sign.  
  
What we want: sharable decentralized storage using digital signature and access  
Created At  
9th November , 2018  
Updated At  
 9th November , 2018

# 86. Medical Emergency App

Organisation : Dept of Atomic Energy

Title : Medical Emergency App

Category : Software

Technology : Healthcare & Biomedical Devices

Complexity : Complicated

Youtube link :

#### Problem Statement Details

Description  
 Timely response to medical emergencies such as cardiac arrest, snake bite, brain haemorrhage is very important for saving life. It is desirable to develop A Medical Emergency App with location–based information which can provide timely help and also mobilize vital resources such as Ambulance, Doctors, Hospital/Medical Centre etc.  
Created At  
5th November , 2018  
Updated At  
 8th November , 2018

# 87. In Surgery Video Annotation

Organisation : Pathirakha Foundation

Title : In Surgery Video Annotation

Category : Software

Technology : Healthcare & Biomedical Devices

Complexity : Complicated

Youtube link :   
https://www.youtube.com/watch?v=UZGBEY4TQ98

#### Problem Statement Details

Description  
 Surgeons perform endoscopic surgery by looking at the live camera view fitted inside an endoscope. Endoscopes are tiny telescopic tubes inserted into patients’ bodies for performing surgery on target with high precision with minimal collateral damage. Inexperienced surgeons often find it difficult to identify what they are seeing on the camera view during surgery. This is because, the endoscope only shows a magnified planar view of a tiny portion inside the body, without any other visual references. It would be good to have a solution which recognizes the body parts, annotates them and also provides a spatial frame of reference to the surgeon on a live camera view.  
Created At  
7th November , 2018  
Updated At  
 7th November , 2018

# 88. Relative Attractiveness Index of World Markets

Organisation : Aurobindo Pharma

Title : Relative Attractiveness Index of World Markets

Category : Software

Technology : Life Sciences

Complexity : Complex

Youtube link :

#### Problem Statement Details

Description  
 To utilize heuristics & predictive AI to dynamically map graphically multiple parameters using mix of internet scouring and syndicated databases  
  
  
  
Solution  
  
  
  
The AI will utilize dynamic data base to update Country market rating on a select cycle for various pharma formulations products  
Created At  
31st October , 2018  
Updated At  
 6th November , 2018

# 89. Pharma Logistics - Tracking Vital Parameters

Organisation : Aurobindo Pharma

Title : Pharma Logistics - Tracking Vital Parameters

Category : Software

Technology : Life Sciences

Complexity : Complicated

Youtube link :

#### Problem Statement Details

Description  
 To develop a solution to Track & Trace the goods using IOT methodology to track variations in Vital Parameters such as Temperature, Location & Damages for Overseas Shipment   
  
  
  
Expected Solution  
  
  
  
To develop a solution to Track & Trace the goods using IOT methodology to track variations in Vital Parameters such as Temperature, Location & Damages   
  
  
  
 Benefits  
  
  
  
Real-time Temperature Monitoring   
  
Real-time Latitude/ Longitude Monitoring & Identify mis-routes  
Created At  
31st October , 2018  
Updated At  
 6th November , 2018

# 90. Effluent Analysis for Anti-Biotic Presence

Organisation : Aurobindo Pharma

Title : Effluent Analysis for Anti-Biotic Presence

Category : Hardware

Technology : Life Sciences

Complexity : Complicated

Youtube link :

#### Problem Statement Details

Description  
 Development of protocol for analysis and quantification of presence of different pharmaceutical products  
  
There are no standard methods available for testing and quantification of products, particularly when present in very low concentrations in waste water for assessment and achievement of level of water treatment efficiency   
  
  
  
Expected Solution  
  
  
  
Hence, development of protocol for analysis and quantification of presence of pharmaceutical compounds/effluent properties .  
Created At  
31st October , 2018  
Updated At  
 6th November , 2018

# 91. Modeling the movement of people in a city

Organisation : KPIT

Title : Modeling the movement of people in a city

Category : Software

Technology : Travel and Tourism

Complexity : Complicated

Youtube link :

#### Problem Statement Details

Description  
 Efficient and safe public transport system within cities is the need of the hour. This would be possible by bridging the supply-demand gap. To achieve this, accurate tracking/estimation of movement of people is required. Demonstrate a mechanism to accurately capture movement of people within city throughout the day and an algorithm to estimate adequate buses required to match the demand.  
Created At  
6th November , 2018  
Updated At  
 6th November , 2018

# 92. Generation of water from thin air

Organisation : KPIT

Title : Generation of water from thin air

Category : Hardware

Technology : Clean Water

Complexity : Complicated

Youtube link :

#### Problem Statement Details

Description  
 Availability of clean and pure drinking water is a challenge faced by majority of rural as well as urban areas in India. There has been a lot of work done on developing technologies for extracting moisture out of air to make it available in the form of pure water. But a cost effective solution is what a country like India needs where the cost of generation of water is less than Re. 1 per litre of water.  
Created At  
6th November , 2018  
Updated At  
 6th November , 2018

# 93. Black spot alert on mobile phones of travelers.

Organisation : Min. of Road Transport

Title : Black spot alert on mobile phones of travelers.

Category : Software

Technology : Software - Mobile App development

Complexity : Simple

Youtube link :

#### Problem Statement Details

Description  
 Road accidental death is a cause of major concern on Highways. Black spot is a place where road traffic accidents have historically been concentrated.  
  
An application may be developed which can capture GIS based location of the user and alert them of nearby black spot on his mobile. Such cautioning can help in reduction of road accidents.  
Created At  
29th October , 2018  
Updated At  
 6th November , 2018

# 94. Electronic Payment of User Fees at the Toll Plazas

Organisation : Min. of Road Transport

Title : Electronic Payment of User Fees at the Toll Plazas

Category : Hardware

Technology : Software - Mobile App development

Complexity : Simple

Youtube link :

#### Problem Statement Details

Description  
 Toll collection at Highways poses a series of issues to commuters in terms of ease of payment as well as time taken to cross the Toll Plaza.  
  
An application supported with on Board Units may be developed which can collect Toll through mobile wallet / other payment gateway by identifying the user in real time and allow smooth and quick transit through the Toll Plaza.  
Created At  
29th October , 2018  
Updated At  
 6th November , 2018

# 95. Automatic Pothole detection while driving

Organisation : KPIT

Title : Automatic Pothole detection while driving

Category : Hardware

Technology : Smart Vehicles

Complexity : Complicated

Youtube link :

#### Problem Statement Details

Description  
 Every year we lose more than 1 lakh lives on Indian roads due to accidents and the proportion of these accidents due to pot holes on the road is quite significant. If these pot holes can be detected in real time while driving, it will benefit two wheeler riders by avoiding it especially when the pot holes are covered by water during monsoon.  
Created At  
6th November , 2018  
Updated At  
 6th November , 2018

# 96. Pipeline Pilferage Prevention & Detection system

Organisation : Oil India Ltd

Title : Pipeline Pilferage Prevention & Detection system

Category : Hardware

Technology : Security & Surveillance

Complexity : Complex

Youtube link :   
https://www.youtube.com/watch?v=2YyCqmHKVcY&featur

#### Problem Statement Details

Description  
 Design of Pipeline Pilferage Prevention & Detection System: The Pilferage activity involve illegal tapping into oil pipelines and withdraw(steal) of valuable product, being transported in the Pipeline. So far, no methodology for detecting exact location of pilferage/ leakage in the pipeline is available. So design of such System is required which can prevent and detect Pilferage in oil pipelines.  
Created At  
2nd November , 2018  
Updated At  
 6th November , 2018

# 97. Mechanism for Crude Oil Wax Handling in Pig Barrel

Organisation : Oil India Ltd

Title : Mechanism for Crude Oil Wax Handling in Pig Barrel

Category : Hardware

Technology : Miscellaneous

Complexity : Complex

Youtube link :   
https://www.youtube.com/watch?v=LoJpR7YB36o&featur

#### Problem Statement Details

Description  
 In Oil India Limited Pipeline due to waxy nature of Assam crude oil, pigging operation is carried out in fortnightly to remove the deposited wax from pipeline. In waxy crude oil pipeline, solid wax is accumulated in between pig and pig receiving barrel door creating problem for removal of pig from barrel .It is proposed here to develop a cost benefit and time saving mechanism either chemical, mechanical or combination of both for easy removal pig from barrel by dissolving the wax in the barrel  
Created At  
2nd November , 2018  
Updated At  
 6th November , 2018

# 98. Sludge developed inside Crude Oil Transport Pipe

Organisation : Oil India Ltd

Title : Sludge developed inside Crude Oil Transport Pipe

Category : Hardware

Technology : Miscellaneous

Complexity : Complex

Youtube link :   
https://www.youtube.com/watch?v=3mzlI-BSvD0&featur

#### Problem Statement Details

Description  
 Oil India Ltd. is Running a sub-surface (Part 16-inch & part 14-inch) Crude Oil Transportation pipeline from Upper Assam Duliajan to Barauni to transport crude from Upper Assam belt. The Crude oil being waxy in nature, heavier hydrocarbons gets deposited inside the pipe as soon as the temperature comes below the wax appearance temperature. To clean the deposits, regularly Pigging is carried out in all the sectors. The solution is required for Profile and Trend of Wax/Sludge deposition.  
Created At  
5th November , 2018  
Updated At  
 6th November , 2018

# 99. Minimizing reject during water purification

Organisation : Thermax

Title : Minimizing reject during water purification

Category : Hardware

Technology : Clean Water

Complexity : Complicated

Youtube link :   
https://www.youtube.com/watch?v=gqxhnVbD-8E

#### Problem Statement Details

Description  
 The current drinking water devices generate 4 to 5 times waste ( reject ) water for every liter of drinking water. Develop a system which can either reduce this reject water or make it zero liquid discharge. The device should be generate WHO quality drinking water from a sub surface and surface water resource available in the country. The water device should be at 10 LPH capacity to 1000 LPH capacity . The students can work on either models but preferable to work on the larger capacity say 400 L  
Created At  
5th November , 2018  
Updated At  
 6th November , 2018

# 100. Financing platform for Startups

Organisation : DIPP

Title : Financing platform for Startups

Category : Software

Technology : Software - Web App development

Complexity : Complex

Youtube link :

#### Problem Statement Details

Description  
 Access to funds is a big roadblock in the growth journey of a Startup. To address this gap, several investment vehicles have been created such as venture funds, fund of funds, etc. to fund Startups. Creating a common platform aggregating all the financing channels for Startups shall remove the bottleneck, ease the application procedure and improve the access to funds. The platform shall also include details for all the financing channels and single application form with application status.  
Created At  
3rd November , 2018  
Updated At  
 5th November , 2018

# 101. Market place for Startups

Organisation : DIPP

Title : Market place for Startups

Category : Software

Technology : Software - Web App development

Complexity : Complex

Youtube link :

#### Problem Statement Details

Description  
 Government proposes to create a market place that will focus on creating marketing opportunities for entrepreneurs to scale their businesses. The marketplace shall comprise of Sellers (Startups) and Buyers (public and private organizations). The key features of such a platform shall include listing of Startups, price discovery of products and ensuring large database of buyer organizations from India and outside  
Created At  
3rd November , 2018  
Updated At  
 5th November , 2018

# 102. Platform to connect Startups with Corporates

Organisation : DIPP

Title : Platform to connect Startups with Corporates

Category : Software

Technology : Software - Web App development

Complexity : Complex

Youtube link :

#### Problem Statement Details

Description  
 Engaging with Startups can be one way for Corporate to get fresh ideas. There is an impending need for creating a platform for Corporate and Startups to connect, exchange their innovative ideas and collaborate to solve wide array of industry problems. The platform shall fulfill following two key objectives:  
  
a. Corporate shall be able to list challenges and source ideas from innovators   
  
b. Innovators shall be able to publish their innovative business ideas and attract interest from corporate  
Created At  
3rd November , 2018  
Updated At  
 5th November , 2018

# 103. Startup Ecosystem Tracker

Organisation : DIPP

Title : Startup Ecosystem Tracker

Category : Software

Technology : Software - Web App development

Complexity : Complicated

Youtube link :

#### Problem Statement Details

Description  
 At present, there is no consolidated register/ database of all Startups across India. A platform may be developed for that purpose. The platform will help in  
  
a. Identifying stakeholders for sourcing information on Startups   
  
b. Dwelling into state startup cells and incubators data   
  
The platform will remove duplicity in Startup data. The collection of this data will help bring in data-driven insights, thereby helping in scale-up of Startups, job creation and economic growth.  
Created At  
3rd November , 2018  
Updated At  
 5th November , 2018

# 104. Platform for Startups to avail mentor-ship support

Organisation : DIPP

Title : Platform for Startups to avail mentor-ship support

Category : Software

Technology : Software - Web App development

Complexity : Complicated

Youtube link :

#### Problem Statement Details

Description  
 Many Startups have to deal with Government entities while working on their business ideas. Government officers may be able to provide required mentorship in product design, complying with regulations and guidelines, information and application process Government schemes, connecting them to relevant stakeholders, providing Government market research data, opportunity to pilot, etc The platform will enable a Mentee to connect with the right Professional Mentor from various Central Government Dept.  
Created At  
3rd November , 2018  
Updated At  
 5th November , 2018

# 105. Grievance Redressal platform for Startups

Organisation : DIPP

Title : Grievance Redressal platform for Startups

Category : Software

Technology : Software - Web App development

Complexity : Simple

Youtube link :

#### Problem Statement Details

Description  
 Startups submit grievances to Ministries/ Departments concerned and in certain cases they request DIPP to intervene and resolve the issues. A dedicated platform for Startups to submit their grievances shall be developed to ensure timely resolution. Platform may include following features: a.Submit the grievance for different categories, Departments, etc.  
  
b. DIPP to review the case and submit recommendation c. Case officer & escalation matrix, d: Request Status, resolution period & action taken  
Created At  
3rd November , 2018  
Updated At  
 5th November , 2018

# 106. Dashboard for monitoring progress of Startup India

Organisation : DIPP

Title : Dashboard for monitoring progress of Startup India

Category : Software

Technology : Software - Web App development

Complexity : Simple

Youtube link :

#### Problem Statement Details

Description  
 Dashboard needs to be developed for DIPP to effectively monitor the progress of 19 action points under the Startup India action plan. The data for the dashboard shall be provided by the departments of Monitoring Committee of Startup India. The dashboard should provide: a. Latest updates on all the action points   
  
b.Archives of Minutes of Meetings of monitoring committee  
  
c.Comparison of targets and achievements of the departments d. Notifications on any achievement/ delay e.Monthly status report  
Created At  
3rd November , 2018  
Updated At  
 5th November , 2018

# 107. Last mile route planning from delivery centers

Organisation : Pepperfry

Title : Last mile route planning from delivery centers

Category : Software

Technology : Software - Web App development

Complexity : Complicated

Youtube link :

#### Problem Statement Details

Description  
 In the order fulfilment process, last mile delivery plays a key role. Once the items reach the delivery centres we need to come up with way to most efficiently plan the route to be taken for the delivery which considers - distance, customer availability, traffic status, vehicle availability and capacity and any other factors. Design a solution which takes the input of all orders to be done on a day and creates the most optimised routes and times to be used by delivery fleet for timely delivery.  
Created At  
31st October , 2018  
Updated At  
 5th November , 2018

# 108. Create a 3D AR mobile buying experience

Organisation : Pepperfry

Title : Create a 3D AR mobile buying experience

Category : Software

Technology : Software - Mobile App development

Complexity : Complicated

Youtube link :

#### Problem Statement Details

Description  
 Buying furniture online needs to provide customers a way of experiencing the look and feel of products within the context of their home. Design and implement a mobile experience where they can place 3D objects from Pepperfry’s product catalogue in their home/office setting using AR - visualise the items in a 3D perspective, change/add multiple items and then proceed to checkout. The 3D objects and checkout flow will be provided by Pepperfry  
Created At  
31st October , 2018  
Updated At  
 5th November , 2018

# 109. Media Plan

Organisation : Ministry of Railways

Title : Media Plan

Category : Software

Technology : Miscellaneous

Complexity : Simple

Youtube link :

#### Problem Statement Details

Description  
 (a)The work of choosing newspapers for every advertisement to be released is done manually.The rate/circulation of newspaper is checked manually from DAVP website, which is laborious and also is prone to error in noting down advertisement rate. (b) It is not feasible to monitor the release of news concerning Ministry of Railways-whether positive or negative due lack of resource/staff. Using digital technology, a system to be devised to inform/give notification in real time or within 12 Hrs.  
Created At  
5th November , 2018  
Updated At  
 5th November , 2018

# 110. App for Pediatric Chronic Care

Organisation : IndiaNeoDesigns

Title : App for Pediatric Chronic Care

Category : Software

Technology : Healthcare & Biomedical Devices

Complexity : Simple

Youtube link :

#### Problem Statement Details

Description  
 Babies born very premature or those with cerebral palsy often have additional needs, for example, a gastric tube. Parents and family members are generally unfamiliar and need a lot of help and assistance. Information about usage and ongoing care is not readily available. There is a need for helping parents navigate the maze of information. Goal: An multilingual educational app (android/iOS) with editable content for parents of children with long-term disability.  
Created At  
30th October , 2018  
Updated At  
 5th November , 2018

# 111. The Mobility Challenge

Organisation : Tata Motors

Title : The Mobility Challenge

Category : Software

Technology : Smart Vehicles

Complexity : Complex

Youtube link :   
https://www.youtube.com/watch?v=JvHtV2Smuu0

#### Problem Statement Details

Description  
 The Challenge is to develop a system to gather anonymized data of people’s movement (no privacy infringement) in a City and then suggest a use-case of how this data can be used to improve any or all of the following attributes of mobility:  
  
1.The need for mobility: Analysis of mass movement across long distances.2.The Efficiency of moving from A to B: 3.The discovery of demand patterns for specific modes of transport.4.The carbon footprint trails.5.The safety of travel.6.Out of Box Insights.  
Created At  
1st November , 2018  
Updated At  
 4th November , 2018

# 112. Intelligent trip management for Electric Vehicles

Organisation : Tata Motors

Title : Intelligent trip management for Electric Vehicles

Category : Hardware

Technology : Smart Vehicles

Complexity : Complex

Youtube link :   
https://www.youtube.com/watch?v=kwNJhKhFxmo

#### Problem Statement Details

Description  
 The biggest anxiety of any electric vehicle owner (Bikes, Cars, Buses and Trucks) is the range they can derive out of a single charge, essentially because of the limited opportunity to charge the vehicles available today.  
  
In this context the challenge is to develop a smart algorithm (a complete simulation model) which takes all the noise factors of the outside environment (e.g. via open APIs) and uses it to manage (via a control logic) the vehicle parameters to ensure optimal battery utilization  
Created At  
1st November , 2018  
Updated At  
 4th November , 2018

# 113. Track and Trace Supply Chain

Organisation : Hindustan Unilever Ltd

Title : Track and Trace Supply Chain

Category : Software

Technology : Security & Surveillance

Complexity : Complex

Youtube link :   
https://www.youtube.com/watch?v=-J8K9vXUkg4

#### Problem Statement Details

Description  
 Every year Millions of units of consumer products are transported from farms to factories to distributors to retailers and finally the end consumer. To deliver Quality and transparency, Organizations need to be able to trace each product to its origin. The challenge is to design a solution to track each of the millions of units from point of origin to retailer. Traditional bar code based solutions becomes difficult to manage beyond the distributors. The design should need minimal human effort.  
Created At  
24th October , 2018  
Updated At  
 4th November , 2018

# 114. Digital Reverse Logistics for Damaged Goods

Organisation : Hindustan Unilever Ltd

Title : Digital Reverse Logistics for Damaged Goods

Category : Software

Technology : Waste Management

Complexity : Complex

Youtube link :   
https://www.youtube.com/watch?v=F\_sQ67NPKM0

#### Problem Statement Details

Description  
 Reverse Logistics is the process of moving goods from their point of consumption or sales for recycling, disposal or reuse. We take back damaged/expired products from about 1.5 million retailers across India. The current process is slow and manual. It takes about 8-12 weeks to process the payment for returned goods. The manual entry makes it difficult to track, audit and analyze the inefficiencies. The Challenge is to design complete digital reverse supply chain for damaged/expired products.  
Created At  
24th October , 2018  
Updated At  
 4th November , 2018

# 115. Referral of Severe Acute Malnourished (SAM) childr

Organisation : IndiaNeoDesigns

Title : Referral of Severe Acute Malnourished (SAM) childr

Category : Software

Technology : Healthcare & Biomedical Devices

Complexity : Simple

Youtube link :

#### Problem Statement Details

Description  
 Nearly 20 million USD per year is invested to operationalize 1151 Nutrition Rehabilitation Centers (NRCs) under National Health Mission to treat children with Severe Acute Malnutrition (SAM). Inefficiency in detection of SAM, and poor referral and lack of tracking system leads to underutilization of services. A mobile application that will facilitate and track referrals of children with SAM to NRCs and provide real-time bed availability status is required.  
Created At  
30th October , 2018  
Updated At  
 4th November , 2018

# 116. Existing pumps in the farms to run by solar power

Organisation : Cyient

Title : Existing pumps in the farms to run by solar power

Category : Hardware

Technology : Agriculture and Rural Development

Complexity : Complicated

Youtube link :

#### Problem Statement Details

Description  
 Existing pumps in the farm lands are not able to deliver at full potential because of the discontinuity of the electric power supply, presently available solar water pumps usually runs with DC and are different from the common sub-mercible pumps. The proposal is to make solar drive that can run existing sub mercible pumps with solar energy without the use of batteries  
Created At  
25th October , 2018  
Updated At  
 2nd November , 2018

# 117. Inductor in Integrated Circuits

Organisation : Cyient

Title : Inductor in Integrated Circuits

Category : Hardware

Technology : Miscellaneous

Complexity : Complicated

Youtube link :

#### Problem Statement Details

Description  
 Integrated circuits have been designed for a long time now, and have aided the developement of hardware in a big way. Most of the analog and digital circuts are possible to be implemented in ICs, but inductor is still not possible to be put in ICs.   
  
There is a need to miniaturize inductors and design them into ICs (integrated Curcuits) to allow for low real estate requirement on pcbs and also reduce losses, and also help in EMI / EMC testing.  
Created At  
25th October , 2018  
Updated At  
 2nd November , 2018

# 118. Developing a Calibration Curve for Typical Joints

Organisation : Cyient

Title : Developing a Calibration Curve for Typical Joints

Category : Software

Technology : Miscellaneous

Complexity : Complicated

Youtube link :

#### Problem Statement Details

Description  
 3D printing of plastics often leads to shrinkage and wrapage of components. Because each component could have a different surface area and volume, the distortion in shape greatly varies between different shapes of components. This poses significant challenge in 3D printing of simple joints and fits that are used to connect two components together.   
  
The challenge is to come up with a calibration curve for a typical joint of two components which will act as a ready reference for engineers  
Created At  
25th October , 2018  
Updated At  
 2nd November , 2018

# 119. Overcoming GDPR in Personalization!

Organisation : Amadeus Software Labs

Title : Overcoming GDPR in Personalization!

Category : Software

Technology : Travel and Tourism

Complexity : Complicated

Youtube link :   
https://www.youtube.com/watch?v=Y7fh6P6N3ac

#### Problem Statement Details

Description  
 General Data Protection Regulation ("GDPR") is a regulation in EU law within European Union (EU) and the European Economic Area (EEA), to protect all EU citizens from privacy and data breaches. At the same time we have an increasing demand for personalization, like personalized travel offers and suggestions. The problem statement is "How can we treat data differently, maintaining the value of personal taste but being able to target specifically, without exposing the data of the individual?"  
Created At  
17th October , 2018  
Updated At  
 2nd November , 2018

# 120. Waste Management

Organisation : Cognizant

Title : Waste Management

Category : Software

Title : Waste Management

Complexity : Simple

Youtube link :

#### Problem Statement Details

Description  
 Households generate degradable (food) and non-degradable (plastics, glass etc.) at a massive scale on a daily basis. Degradable waste can be readily made into compost with simple tools while non-degradable waste could be collected and deposited at the regional centers who recycle the material. An on-demand service would be helpful for the public to manage their plastic waste conveniently. This reduces landfills to major extent.  
Created At  
1st November , 2018  
Updated At  
 2nd November , 2018

# 121. Self Learning BOT

Organisation : Cognizant

Title : Self Learning BOT

Category : Software

Technology : Robotics & Drones

Complexity : Complex

Youtube link :

#### Problem Statement Details

Description  
 A BOT with self-learning capability with modern natural language processing or deep learning and transliteration cognitive capabilities. The BOTS should scores answer relevancy over time intelligently and can answer tech or non-tech people differently based on their technical ability  
Created At  
1st November , 2018  
Updated At  
 2nd November , 2018

# 122. Avoid Cash Crop Loss

Organisation : Cognizant

Title : Avoid Cash Crop Loss

Category : Software

Technology : Agriculture and Rural Development

Complexity : Complicated

Youtube link :

#### Problem Statement Details

Description  
 The idea is to help cash crop farmers select the right time to harvest their produce to avoid crop loss due to various diseases and lack of rain. Tamilnadu as a state will stand to gain enormously by using such ML aided applications in advising the farmers on a variety of such issues. The problem statement differs from one state to another and the coverage is also quite wide. Picking one crop for a select set of area and a select set of farmers with selected diseases or crop damage issue could  
Created At  
1st November , 2018  
Updated At  
 2nd November , 2018

# 123. Live School for World class free education

Organisation : Cognizant

Title : Live School for World class free education

Category : Software

Technology : Agriculture and Rural Development

Complexity : Complex

Youtube link :

#### Problem Statement Details

Description  
 Connect volunteer teachers (educated housewives, retired persons or similar profile)  
  
and students anywhere in the world through an online and live portal. This will be 24/7 open  
  
school where any student can join the classes on any subject at anytime from anywhere. There  
  
are many orphanages where kids are not getting education and old age homes where educated  
  
citizens are willing to share the knowledge but have no way to share. This application will  
  
provide a platform for many such use cases.  
Created At  
1st November , 2018  
Updated At  
 2nd November , 2018

# 124. Knowledge sharing platform for problem solving

Organisation : Min.of Labour & Employmnt

Title : Knowledge sharing platform for problem solving

Category : Software

Technology : Software - Web App development

Complexity : Complicated

Youtube link :

#### Problem Statement Details

Description  
 VVGNLI is an apex institution under the MoL&E committed to labour research and training for enhancing the quality of work and work relations in the ever changing work milieu. “Labour” being a Concurrent Subject, States too have Labour Institutes which also operate with near similar objectives. A lot of knowledge and expertise is generated by these institutions on a day to day basis and a common IT platform (interactive) is required to share the same on a real time basis.  
Created At  
31st October , 2018  
Updated At  
 2nd November , 2018

# 125. Eradication of Child Labour using Systems Approach

Organisation : Min.of Labour & Employmnt

Title : Eradication of Child Labour using Systems Approach

Category : Software

Technology : Software - Web App development

Complexity : Complex

Youtube link :

#### Problem Statement Details

Description  
 Though prohibited, and having PENCIL Portal, child labour is still rampant in the country in various sectors. An integrated approach across various stakeholders including Central Ministries and State Governments is required through which child labour can be prevented and also the rescued children can be effectively monitored and tracked in the country.  
Created At  
31st October , 2018  
Updated At  
 2nd November , 2018

# 126. Autonomous BOT for Retail

Organisation : Infosys

Title : Autonomous BOT for Retail

Category : Software

Technology : Software - Mobile App development

Complexity : Complex

Youtube link :

#### Problem Statement Details

Description  
 Design and develop an autonomous bot, that could be used in a large retail store to help with the following activities for a customer  
  
•The bot should provide a user interface wherein the customer will enter the product name or say the product name and the bot should determine in which aisle the product is located and travel to that spot. The customer will follow the bot  
  
•The bot should also display promotional information of the stores  
Created At  
31st October , 2018  
Updated At  
 1st November , 2018

# 127. Building Inspection & Monitoring

Organisation : Infosys

Title : Building Inspection & Monitoring

Category : Hardware

Technology : Robotics & Drones

Complexity : Complex

Youtube link :

#### Problem Statement Details

Description  
 A lot of high rise and older building will be in dilapidated conditions or would develop cracks or leakage over a period of time. Design and develop a drone based video surveillance solution that could be used to inspect the high rise buildings or buildings in hazardous conditions. Once the video feed is captured, analyze the video feed to identify the state of the building focusing on finding cracks, water leaks, structural damages etc.  
Created At  
31st October , 2018  
Updated At  
 1st November , 2018

# 128. Traffic and accident management

Organisation : Infosys

Title : Traffic and accident management

Category : Software

Technology : Security & Surveillance

Complexity : Complicated

Youtube link :

#### Problem Statement Details

Description  
 Traffic & Accident management in India is a complex activity given the number of riders & automobiles we have. Using the existing video feeds that come through the cameras positioned on highways, traffic signal & busy roads, detect the following incidents/events 1) Bike riders who are riding without helmets 2) Count of vehicles that are passing through a signal/road at any given point in time. It should allow report generation on various parameters. 3) Ability to read vehicle no & track & search  
Created At  
31st October , 2018  
Updated At  
 1st November , 2018

# 129. 7. 7. TeleScreening 60 mts HealthCheck @ Work P

Organisation : Apollo Hospitals

Title : 7. 7. TeleScreening 60 mts HealthCheck @ Work P

Category : Hardware

Technology : Healthcare & Biomedical Devices

Complexity : Complex

Youtube link :

#### Problem Statement Details

Description  
 Design, develop and produce a user friendly, multipurpose standalone diagnostic POCD which would provide clinically reliable results for specific pre designed tests including height, weight, BMR, BP, Hb, PCV, HbA1C, urea, creatinine, bilirubin, ECG etc for remote evaluation  
Created At  
30th October , 2018  
Updated At  
 1st November , 2018

# 130. 5. Software for better AV Clarity on Low bandwidth

Organisation : Apollo Hospitals

Title : 5. Software for better AV Clarity on Low bandwidth

Category : Software

Technology : Smart Communication

Complexity : Simple

Youtube link :   
https://www.youtube.com/watch?v=wPXKZ95jqvY&featur

#### Problem Statement Details

Description  
 To design, develop and demonstrate the functioning of a reliable, cost effective, high security, platform to facilitate good video conferencing when the bandwidth drops from 140 to 400 kbps from contracted bandwidth is 512 kbps ( 1:1) . This should be reliable at external temperatures of -25C at heights of 14,000 ft  
Created At  
30th October , 2018  
Updated At  
 1st November , 2018

# 131. 4. Automated intelligent humanoid robot in ICU

Organisation : Apollo Hospitals

Title : 4. Automated intelligent humanoid robot in ICU

Category : Hardware

Technology : Robotics & Drones

Complexity : Complex

Youtube link :   
https://www.youtube.com/watch?v=oQZVf\_WlDy4&featur

#### Problem Statement Details

Description  
 To design, develop and demonstrate the functioning of a reliable, cost effective, mechanised / automated intelligent humanoid robot to assist nurses in their daily tasks for moving and turning patients and giving the patients a bath  
Created At  
30th October , 2018  
Updated At  
 1st November , 2018

# 132. 3. Virtual Visits to ICU’s

Organisation : Apollo Hospitals

Title : 3. Virtual Visits to ICU’s

Category : Software

Technology : Healthcare & Biomedical Devices

Complexity : Complex

Youtube link :   
https://www.youtube.com/watch?v=99Jj21BY0-M&featur

#### Problem Statement Details

Description  
 :. I-SEE-U: To design, develop and demonstrate the functioning of a reliable, cost effective, high security, platform to facilitate virtual visits to the ICU by authorized relatives/ friends from anywhere at approved times. This Value added Service should be self sustaining thro revenue generation.  
Created At  
30th October , 2018  
Updated At  
 1st November , 2018

# 133. 2. Handholding Robots for deployment in Apollo Hos

Organisation : Apollo Hospitals

Title : 2. Handholding Robots for deployment in Apollo Hos

Category : Hardware

Technology : Robotics & Drones

Complexity : Complex

Youtube link :   
https://www.youtube.com/watch?v=UMIQxgd9IOs&featur

#### Problem Statement Details

Description  
 To design, develop and demonstrate the functioning of a reliable cost effective Humanoid Intelligent robot which could be customized, to receive patients in a hospital, take them to various departments and obtain feedback on various services. Machine language processing could be used for in depth, data analysis, self-learning and reinforcement  
Created At  
30th October , 2018  
Updated At  
 1st November , 2018

# 134. Keyword based Exploration of Library Sources

Organisation : Hinduja Hospital

Title : Keyword based Exploration of Library Sources

Category : Software

Technology : Healthcare & Biomedical Devices

Complexity : Complex

Youtube link :   
https://www.youtube.com/watch?v=6q2Km\_6N8hs&t=13s

#### Problem Statement Details

Description  
 DNB students have to complete a dissertation/ thesis on a research topic for which they require library support. The students and their guides face challenges in searching and accessing relevant articles/ papers from the inhouse library. We want a software solution which will offer a platform that will download all the Indian and global references that are relevant to the students’ research topics.  
Created At  
30th October , 2018  
Updated At  
 1st November , 2018

# 135. Washroom Management for the Hospital

Organisation : Hinduja Hospital

Title : Washroom Management for the Hospital

Category : Software

Technology : Healthcare & Biomedical Devices

Complexity : Complex

Youtube link :   
https://www.youtube.com/watch?v=XpNIJ4MInUQ&t=7s

#### Problem Statement Details

Description  
 We have 4 facilities accommodating OPD, Diagnostics Lab, IPD wards, offices etc. Each floor has multiple washrooms for patients, staff and visitors. The washrooms are cleaned by the Housekeeping staff on a rota basis. Depending on the location, the time of the day etc., a washroom might get dirty much before the next clean-up is scheduled. We need an interactive solution which uses technology to sense if a washroom is dirty, and alerts Housekeeping and captures and analyses data.  
Created At  
30th October , 2018  
Updated At  
 1st November , 2018

# 136. One Click Research Solution @ Hinduja Hospital (OC

Organisation : Hinduja Hospital

Title : One Click Research Solution @ Hinduja Hospital (OC

Category : Software

Technology : Healthcare & Biomedical Devices

Complexity : Complex

Youtube link :   
https://www.youtube.com/watch?v=RHrKQ4lJa7c&featur

#### Problem Statement Details

Description  
 Since 1987 till date almost 1200+ projects have been processed by our Research Department. At present the files and documents of all the projects are recorded or stored in excel sheets or word documents. Research Administration finds it challenging to handle, supervise, monitor and track the progress of the study in the context of defined timelines as the entire project related data are not linked. We need a digital platform that can link all these documents and send emails.  
Created At  
30th October , 2018  
Updated At  
 1st November , 2018

# 137. Distribution of Electric Power for agriculture

Organisation : Ministry of Power

Title : Distribution of Electric Power for agriculture

Category : Software

Technology : Software - Web App development

Complexity : Complex

Youtube link :

#### Problem Statement Details

Description  
 Due to lack of guidance and knowledge farmers are unable to manage to utilise the subsidised electric power effectively. Due to which peak demand is very high at a given time subsequently uncalled shutdown in the distribution system.  
Created At  
1st November , 2018  
Updated At  
 1st November , 2018

# 138. Feedback of Power supply position

Organisation : Ministry of Power

Title : Feedback of Power supply position

Category : Software

Technology : Software - Web App development

Complexity : Complex

Youtube link :

#### Problem Statement Details

Description  
 • Availability of power supply in rural and urban areas with duration  
  
• Duration of interruption of Power Supply in rural and urban areas  
  
• The above data to be mapped with administrative boundaries like Census Village, District and State for better identification and analysis.  
Created At  
1st November , 2018  
Updated At  
 1st November , 2018

# 139. Daily update on construction site progress

Organisation : Everest Industries Ltd

Title : Daily update on construction site progress

Category : Software

Technology : Software - Mobile App development

Complexity : Complicated

Youtube link :

#### Problem Statement Details

Description  
 Steel building construction planning and actual on site progress against planning needs to get monitored and analysed on daily basis to identify the risks. Tool is required to update the status of the activities against the planned one on daily basis for effective monitoring of each project.  
Created At  
31st October , 2018  
Updated At  
 31st October , 2018

# 140. E-recording of off-cut plates from nesting softwar

Organisation : Everest Industries Ltd

Title : E-recording of off-cut plates from nesting softwar

Category : Software

Technology : Miscellaneous

Complexity : Complicated

Youtube link :

#### Problem Statement Details

Description  
 During manufacturing of built-up I sections, plate nesting software OmniCAD or 2D – Plus is used to nest the virgin raw material plates. After nesting for a particular project, unutilized balance non-standard shape of plate needs to be stored electronically in CAD form to get utilized in future project. Tool is required to store the shapes and archive it during new nesting planning.  
Created At  
31st October , 2018  
Updated At  
 31st October , 2018

# 141. Automatic Production Planning & Scheduling of Size

Organisation : Everest Industries Ltd

Title : Automatic Production Planning & Scheduling of Size

Category : Software

Technology : Software - Web App development

Complexity : Complicated

Youtube link :

#### Problem Statement Details

Description  
 In order to manufacture products ( size wise, quantity and expected delivery date) as required by the market, company require Makesheet ( Production Plan ) to Schedule and manufacture the products. Company is looking for solution based on market requirement – size-wise product, quantities and expected date of delivery and also the Sheet Machine conditions required to manufacture different size products.  
Created At  
31st October , 2018  
Updated At  
 31st October , 2018

# 142. Optimum Inventory Control of Machine Spares and Co

Organisation : Everest Industries Ltd

Title : Optimum Inventory Control of Machine Spares and Co

Category : Software

Technology : Software - Web App development

Complexity : Complicated

Youtube link :

#### Problem Statement Details

Description  
 Everest Industries Limited, has 12 manufacturing line. For Plant and Machinery, company maintains Spare Parts and consumables at each plant location. To have an Optimum Inventory (Just in Time) of spares and consumables based on consumption rate/pattern and lead time.  
Created At  
31st October , 2018  
Updated At  
 31st October , 2018

# 143. Tracking spurious drugs & ensuring brand safety

Organisation : Emcure Pharmaceutical Ltd

Title : Tracking spurious drugs & ensuring brand safety

Category : Software

Technology : Life Sciences

Complexity : Simple

Youtube link :

#### Problem Statement Details

Description  
 The proliferation of counterfeit drugs is a serious concern for all pharmaceutical companies. We need to implement ways to integrate track and trace solutions in production and supply chain. We should be able to identify such spurious drugs which are deliberately or fraudulently mislabeled with respect to identity/source.  
Created At  
29th October , 2018  
Updated At  
 31st October , 2018

# 144. 1) Expedite first-in-human clinical trials

Organisation : Emcure Pharmaceutical Ltd

Title : 1) Expedite first-in-human clinical trials

Category : Software

Technology : Life Sciences

Complexity : Simple

Youtube link :

#### Problem Statement Details

Description  
 We need to design innovative ways, wherein, the first-in-human (FIH) trials can be expedited. So instead of having multiple phases of clinical trials, there is just one continuous expansion cohort trial. This shouldn’t compromise on the quality of the drug and should include all safety measures to protect patients enrolled in the expansion cohort studies. This process should reduce the development cost and time spent waiting in-between the start and end phases of trials.  
Created At  
29th October , 2018  
Updated At  
 31st October , 2018

# 145. Low-cost, high-accuracy lubricant testing kit

Organisation : Indian Oil

Title : Low-cost, high-accuracy lubricant testing kit

Category : Hardware

Technology : Renewable Energy

Complexity : Complex

Youtube link :

#### Problem Statement Details

Description  
 The existing lube testing equipment is very costly & can't be deployed in field. There is need for an effective methodology & toolkit for   
  
monitoring conditions of lube during its use in field. Such lube test kits will provide a quick assessment of lubricant   
  
quality & will help in controlling associated machinery failure.   
  
The proposed kit should aim at at least giving accurate information of used oils with respect to viscosity,total base number, total acid number & moisture content  
Created At  
30th October , 2018  
Updated At  
 30th October , 2018

# 146. Innovative re-refining of used lubricating oils

Organisation : Indian Oil

Title : Innovative re-refining of used lubricating oils

Category : Hardware

Technology : Renewable Energy

Complexity : Complex

Youtube link :

#### Problem Statement Details

Description  
 Process methods using solvent/acid treatment for re-refining of used lubricating oils available in the market are not eco-friendly solutions for the problem. However, since oil conservation is of immediate importance & used oil disposal in an environment-friendly way is of utmost importance, we are looking for novel concept/idea for re-refining used lubricating oils in an eco-friendly manner, without solvent/acid treatment.  
Created At  
30th October , 2018  
Updated At  
 30th October , 2018

# 147. Re-forestation using "self driven" robotic vehicle

Organisation : VMware Software India Pvt

Title : Re-forestation using "self driven" robotic vehicle

Category : Software

Technology : Robotics & Drones

Complexity : Complex

Youtube link :

#### Problem Statement Details

Description  
 We have vast areas of land with no forest cover, growing trees on this is tedious as these lands are remote and need manual labor and logistics. Even when the land is near by (like land belonging to army is usually very close to their camps, but lies vacant with no trees being planted), investing manual labor in this task is difficult.The proposed solution shall plant seeds and water the plants, monitor plant growth and suggest improvements to increase the green cover  
Created At  
30th October , 2018  
Updated At  
 30th October , 2018

# 148. High-thermal efficiency gas burner

Organisation : Indian Oil

Title : High-thermal efficiency gas burner

Category : Hardware

Technology : Renewable Energy

Complexity : Complex

Youtube link :

#### Problem Statement Details

Description  
 Liquefied Petroleum Gas (LPG) is extensively used in domestic as well as industrial cooking. It is a precious and non-renewable energy source. Therefore, it is highly essential to use it efficiently by employing energy-efficient devices. With the objective of conserving LPG fuel, IndianOil is looking for design and development of energy-efficient devices for domestic & industrial cooking that surpass the thermal efficiencies of devices available in the market.  
Created At  
30th October , 2018  
Updated At  
 30th October , 2018

# 149. Ensuring effective detection of currency counterfeits across different touch points

Organisation : NCR

Title : Ensuring effective detection of currency counterfeits across different touch points

Category : Software

Technology : Finance

Complexity : Complex

Youtube link :

#### Problem Statement Details

Description  
 Currently, currency notes that are in legal tender are used widely in the economy for different transactions and are accepted at various banking touchpoints like branches, ATMs, banking correspondents etc. as well as commerce touchpoints like retail stores, petrol bunks and for various utility/government services. Some touchpoints are more mature at detecting and eliminating counterfeit notes like note counters in branches and note accepting ATMs, but in a wide array of touchpoints cash handling is manual. If simple software that can be downloaded on a phone can detect counterfeit notes that have been detected at other touchpoints then counterfeit detection can be vastly improved thus reducing the fraud.  
Created At  
30th October , 2018  
Updated At  
 30th October , 2018

# 150. Stop Noise pollution from honking

Organisation : Maruti Suzuki India Ltd.

Title : Stop Noise pollution from honking

Category : Hardware

Technology : Smart Vehicles

Complexity : Complex

Youtube link :

#### Problem Statement Details

Description  
 'Indian Roads are very Noisy due to various road users and congestion factors., its a custom in India to paint Truck Rear with message " BLOW HORN". Honking is a habit and people like to install various types of horn to generate discrete audible noise. Horn blowing leads to noise pollution and creates a chaotic environment.   
  
Horn is a device to be used in emergency and if it is used repeatedly in very short succession then there should be system having the following features ::  
  
 - recording the no. of times a horn is pressed by the driver & this should be further linked with driving capability which in turn should be be used to calculate insurance premium / permit charges for taxi, etc..  
Created At  
11th October , 2018  
Updated At  
 30th October , 2018

# 151. Live AQI (Air quality Index) Map like Google traffice map for the use of various stakeholders (Car Drivers,OEMs, individuals etc.)

Organisation : Maruti Suzuki India Ltd.

Title : Live AQI (Air quality Index) Map like Google traffice map for the use of various stakeholders (Car Drivers,OEMs, individuals etc.)

Category : Hardware

Technology : Smart Communication

Complexity : Complex

Youtube link :

#### Problem Statement Details

Description  
 '- The AQI index of City is available, it doesn't inform the pollutant level on different areas & roads of the city  
  
- There should be a system for monitoring of AQI for different road levels thru physical measurement & AI and this data should be available on cloud for the use of various stakeholders  
  
- Find use cases for such information  
Created At  
11th October , 2018  
Updated At  
 30th October , 2018

# 152. On the spot (Realtime) Accident information & Insurance dispute resolution

Organisation : Maruti Suzuki India Ltd.

Title : On the spot (Realtime) Accident information & Insurance dispute resolution

Category : Software

Technology : Software - Web App development

Complexity : Complex

Youtube link :

#### Problem Statement Details

Description  
 '- There should be a system / portal for gathering of on the spot information during road accidents. This information should include photos of the site, interviews with eyewitnesses, information on injuries and fatalities, reason for accident, speed, road condition on relative basis, etc..  
  
- All this data can go into a central database   
  
- The responsibility for collecting the data could be given either to police, transport authority, ambulance or even ordinary citizens who volunteer for the same  
  
- In the same system, there should also be a provision to submit / exchange Insurance numbers / details in order to settle the dispute if any arising out of accident  
Created At  
11th October , 2018  
Updated At  
 30th October , 2018

# 153. Finished Goods DISPATCH BAY Mnagement Automation

Organisation : NALCO

Title : Finished Goods DISPATCH BAY Mnagement Automation

Category : Hardware

Technology : Smart Communication

Complexity : Complex

Youtube link :

#### Problem Statement Details

Description  
 Environment-  
  
We have 4-5 Dispatch Storage Area (DSA) of 100 mtr by 50 mtr, aprox 500-2000mtrs away from each other.  
  
From the Production Bay (PB) the Finished Goods (FG) are transferred to DSA. Each FG has usable parameters viz. an Identification Number (UID), Quality Indicators (QINDs) and Weight (WTG). The FGs are arranged in DSA with help of Fork Lifts in a defined and orderly manner in specified zones. The DSA is demarcated into physical smaller grids/zones of 5 X 5 mtr in a physical manner with markers placed on the periphery of DSA.  
  
 n.b. – Each FG weighs approx. 980kg +/- 0-30kg.  
  
 Each TRUCK is to be loaded with approx. 9-10T of FG as per LS.  
  
Operation-  
  
A. From the PB area the FGs are shifted by the Operator to DSA and are arranged at specific physical Grid Locations with help of Fork Lifts.   
  
  
  
B. At the day end, Dispatch Plan is prepared for next day and truck placement request is sent to FG picker and Transporter.  
  
  
  
C. The Picker identifies the require material at DSA as per the Dispatch plan.  
  
  
  
D. The truck enters the plant and tare weight (TW) is recorded, QIND, Total Quantity to be Dispatched (TQTY), Truck Number (TN) is recorded on the Loading Slip (LS) before being directed to DSA.  
  
  
  
E. With given LS (UID, TN, QIND and TQTY) the Fork Lift operator locate, reach, pick and loads the material identified by picker on to the truck.  
  
  
  
F. The Loading Slip (LS) is completed recording specific FG UIDs and the truck moves towards the weighbridge for final weighment and then proceeds to the DISPATCH section for billing.   
  
  
  
Problem-  
  
Placement of FG in the specified ZONE in DSA while receiving from PB is very difficult …..  
  
During shifting of FGs from PB to DSA, the physical storage Location is not digitally linked on Database to the UID of FG causing problem locating in a later time while tracing for loading on to a truck.  
  
  
  
Locating the FG in DSA leading to higher TURN AROUND time …..  
  
At times due to some local problem of space, non-adherence to set procedure, unloading from a Consigner Truck, rearrangement of FGs within DSA, etc. the FG gets mis-located within the DSA and are difficult to locate, reach, pick and load the FG in a timely and efficient manner while loading the consigner truck.  
  
  
  
Manual LS preparation and multiple point of data entry ……  
  
The Loading Slip (LS) details are recorded on a paper and sent to Invoicing team for processing.  
  
  
  
Defining a proper zone and storage of FG for ease of accessibility …..  
  
  
  
Improvements Desired-  
  
To devise a procedure that is automated, smart and intelligent to bring in Quicker turn-around time of Truck Loading  
  
  
  
a. Assistance to the process of Shifting FGs to DSA from PB  
  
b. Tag the FG with GRID Identity to facilitate the Dispatch Process  
  
c. Suggest Fork Lift Operator the next FG to pick  
  
d. Option with Fork Lift Operator to look out for an alternate FG  
  
e. Provide/Display a FG map overlaying the GRID of DSA  
Created At  
29th October , 2018  
Updated At  
 30th October , 2018

# 154. Using AI to improve slotting, picking routes

Organisation : Vanderlande

Title : Using AI to improve slotting, picking routes

Category : Software

Technology : Miscellaneous

Complexity : Complex

Youtube link :   
https://www.youtube.com/watch?time\_continue=6&v=nF

#### Problem Statement Details

Description  
 In the future it is expected that robots can do the same activities as the operators in a traditional warehouse. So, one could have a warehouse where both robots and operators are responsible for replenishment and picking tasks.   
  
The assignment is to make a system where we can learn from the operators in the WH (how is the slotting and picking routes operator uses). The idea is to use artificial intelligence, that learns from operators, to develop a strategy which will be used to instruct Robots  
Created At  
26th October , 2018  
Updated At  
 29th October , 2018

# 155. MarkingByDrone

Organisation : Vanderlande

Title : MarkingByDrone

Category : Hardware

Technology : Robotics & Drones

Complexity : Complicated

Youtube link :   
https://www.youtube.com/watch?v=2KpVX\_JVdxs&featur

#### Problem Statement Details

Description  
 In any equipment or machine manufacturing industry, when the site is ready with proper flooring and electricity, one needs to start installing the equipment. In a typical system there are many components that have to be installed within a building or closed area. Now this is done manually by installation team. With the advent of drone technology, one should be able to automate the process of manual measurement and marking. The solution should be aimed at simple yet accurate (within +/- 10mm)  
Created At  
26th October , 2018  
Updated At  
 29th October , 2018

# 156. Telepicking Interface with item picking Robotics

Organisation : Vanderlande

Title : Telepicking Interface with item picking Robotics

Category : Hardware

Technology : Robotics & Drones

Complexity : Complicated

Youtube link :   
https://www.youtube.com/watch?v=NeYjq5gYTNA

#### Problem Statement Details

Description  
 Most distribution centers (warehouses) uses a good-to–person picking model and automated system to compile orders.   
  
A latest available technology component to be used to Interface with robotic item picking and operator. Remote operation by operator of these robotic item picking using the control devices like joystick, remote hand.   
  
The operator should be able to visualize this process by camera  
Created At  
26th October , 2018  
Updated At  
 29th October , 2018

# 157. Crowd sourcing of the works for MPs

Organisation : Min. of Statistics & PI

Title : Crowd sourcing of the works for MPs

Category : Software

Technology : Software - Mobile App development

Complexity : Complex

Youtube link :   
https://www.youtube.com/watch?v=yCkOOPUEAdg

#### Problem Statement Details

Description  
 There is a need to develop a digital platform which provides the citizens to list the works that should be recommended by a particular MP or to endorse the listed works of others. The platform should also inform the respective MPs about the works that are listed for his recommendation along with the number of endorsement each work has received. However, it would be discretion of an MP to select the works, out of this crowd sourced works, for recommendation.  
Created At  
29th October , 2018  
Updated At  
 29th October , 2018

# 158. Voice/Textual BOT mobile app

Organisation : Dalmia Cement

Title : Voice/Textual BOT mobile app

Category : Software

Technology : Software - Mobile App development

Complexity : Complicated

Youtube link :   
https://www.youtube.com/watch?v=XEgTYSs98Ys&featur

#### Problem Statement Details

Description  
 Develop a generic BOT mobile App (Android and ios) that can be used for voice/textual chat interactions with various stake holders in a structured and/or unstructured manner.   
  
E.g. structured – what is my order status? – BOT would respond with the current order status by fetching the same from back end Database.  
  
E.g Unstructured – status - BOT would respond with order status, delivery status, payment status, etc. from back end Database.  
  
Architecture should be open enough to be used with multiple  
Created At  
24th October , 2018  
Updated At  
 29th October , 2018

# 159. To find out the aptitude of a child

Organisation : Ministry of Culture

Title : To find out the aptitude of a child

Category : Software

Technology : Miscellaneous

Complexity : Complex

Youtube link :   
https://www.youtube.com/watch?v=9ZtUq\_tC1-I&featur

#### Problem Statement Details

Description  
 AI based game application using Gardner’s Theory of Multiple Intelligence.  
Created At  
22nd October , 2018  
Updated At  
 29th October , 2018

# 160. To measure science literacy/scientific temper

Organisation : Ministry of Culture

Title : To measure science literacy/scientific temper

Category : Software

Technology : Miscellaneous

Complexity : Complex

Youtube link :   
https://www.youtube.com/watch?v=n7hL-gRhAcU&featur

#### Problem Statement Details

Description  
 An App based questionnaire/feedback form with the use of only graphics/pictures/charts without text material could be developed for analysing feedback.  
Created At  
22nd October , 2018  
Updated At  
 29th October , 2018

# 161. Integrated Health Care App/Portal

Organisation : Thermo Fisher

Title : Integrated Health Care App/Portal

Category : Software

Technology : Life Sciences

Complexity : Complicated

Youtube link :   
https://www.youtube.com/watch?v=4CjWDnDVt0Q&featur

#### Problem Statement Details

Description  
 Develop the concept of an integrated Health Care portal with App that helps common man to look for a hospital or a doctor for any consultation needs or undergoing medical procedure.  
  
  
  
A platform that offers service providers approved for offering diagnostic tests at regulated price and quality.  
  
  
  
This portal could be linked to IRDA approved healthcare insurance companies with clear mention of what is included and what is not, Deductibles, etc.  
Created At  
10th October , 2018  
Updated At  
 29th October , 2018

# 162. Health alerts application for a region

Organisation : Mathworks India Pvt Ltd

Title : Health alerts application for a region

Category : Software

Technology : Healthcare & Biomedical Devices

Complexity : Simple

Youtube link :   
https://www.youtube.com/watch?v=x00\_XwhmoAw

#### Problem Statement Details

Description  
 Viral/Mosquito borne diseases rise seasonally and regionally. No centralized application is available to source data reported. Availability of such application could send expert team to take necessary actions but can also notify public about health alerts per region. A simple smart phone/web application that can collect data from regional medical authorities and send it to MathWorks ThingSpeak Channel. MathWorks products analyze data and appropriate graphical representation may be generated.  
Created At  
24th October , 2018  
Updated At  
 29th October , 2018

# 163. Smart bins for waste management

Organisation : Mathworks India Pvt Ltd

Title : Smart bins for waste management

Category : Software

Technology : Healthcare & Biomedical Devices

Complexity : Complicated

Youtube link :   
https://www.youtube.com/watch?v=HM6NCUD3QyI

#### Problem Statement Details

Description  
 Waste management not efficiently handled like many smart cities in other countries. From collection to processing and disposal, the most challenging is to improve the use of public trash bins. Mostly the disposal is not done on time. This leads to unhealthy environment and which affects the ecosystem. The idea of smart bins emerged from this so that Municipal authorities can handle this situation smartly. Category could be mix of hardware & Software. MATLAB has solutions to solve this issue.  
Created At  
24th October , 2018  
Updated At  
 29th October , 2018

# 164. Aerial Traffic Monitoring using UAVs

Organisation : Mathworks India Pvt Ltd

Title : Aerial Traffic Monitoring using UAVs

Category : Software

Technology : Robotics & Drones

Complexity : Complicated

Youtube link :   
https://www.youtube.com/watch?v=LnwuFC\_uWP8

#### Problem Statement Details

Description  
 Focuses on developing a specialized aerial solution for automatic aerial analysis of traffic activity in highways and city roads using UAV's. The goal is to explore new possibilities in the field of traffic analysis by its fully automatic calculation of a wide range of traffic parameters such as speed, densities, time, and pollution levels. MathWorks tools like the Image Processing,Computer Vision, Statistics and Machine Learning,Mapping Toolboxes and Hardware Support Packages for drones.  
Created At  
24th October , 2018  
Updated At  
 29th October , 2018

# 165. Reducing Cotton Picking Cost of Indian Farmer

Organisation : MAHYCO

Title : Reducing Cotton Picking Cost of Indian Farmer

Category : Hardware

Technology : Agriculture and Rural Development

Complexity : Simple

Youtube link :   
https://www.youtube.com/watch?v=XMSnaJiZ8nI&featur

#### Problem Statement Details

Description  
 Cotton picking is completely manual in India. Because of increasing labour costs, cost of picking cotton has increased substantially. It is about 40-50% of total crop management cost and accounts for 15 to 20% of gross income.Mechanised picking is cost effective & better than hand-picking since the latter can lead to contamination.What we want is a Small machine that can pick minimum 150-200 Kg cotton per day from cotton plants.  
Created At  
18th October , 2018  
Updated At  
 26th October , 2018

# 166. Mobile App for Rental Battery

Organisation : Hero Electric Vehicles

Title : Mobile App for Rental Battery

Category : Software

Technology : Smart Vehicles

Complexity : Complex

Youtube link :   
https://www.youtube.com/watch?v=Bd5TUwid5gE&featur

#### Problem Statement Details

Description  
 This requires advance BMS development for locking and unlocking the Lithium ion battery BMS on basis of monthly payment by customer. The battery operating vital parameters to be stored in cloud for later retrieval during maintenance. Participant to develop logic and the embedded system for battery capacity from 1 to 3 KWhr purchase on lease instead of one time investment in lithium battery. This will promote E-mobility solutions over conventional fuel scooters.  
Created At  
23rd October , 2018  
Updated At  
 25th October , 2018

# 167. Dash board/App to monitor STP running status

Organisation : Min. of Water Resources

Title : Dash board/App to monitor STP running status

Category : Software

Technology : Software - Web App development

Complexity : Simple

Youtube link :   
https://www.youtube.com/watch?v=D9GPPFwDJN4&featur

#### Problem Statement Details

Description  
 How to monitor the live status of sewage treatment plant & inlet/outlet water quality monitoring through dash board & App Using • Quantity of treated/untreated water   
  
• Time of open & close STP functions  
Created At  
16th October , 2018  
Updated At  
 24th October , 2018

# 168. Aquatic drone for water quality measurement

Organisation : Min. of Water Resources

Title : Aquatic drone for water quality measurement

Category : Hardware

Technology : Robotics & Drones

Complexity : Simple

Youtube link :   
https://www.youtube.com/watch?v=6\_DMs\_0rQE4&featur

#### Problem Statement Details

Description  
 How to measure, map & monitor the water quality of Ganga River, its tributaries & drains along X section through sensor deployed on aquatic Drone. Develop a aquatic drone   
  
• Handled/ controlled by mobile app   
  
• Data fetch on geo web portal like Bhuvan Ganga Geoportal   
  
• Live streaming of water quality monitoring  
Created At  
16th October , 2018  
Updated At  
 24th October , 2018

# 169. Distribution of groundwater intensive industries

Organisation : Min. of Water Resources

Title : Distribution of groundwater intensive industries

Category : Software

Technology : Software - Web App development

Complexity : Simple

Youtube link :   
https://www.youtube.com/watch?v=jFGMv92J\_wU&featur

#### Problem Statement Details

Description  
 CGWA provides NOC for extraction of groundwater for Industrial purpose. The data of the Industries and the Quantum of extraction permitted for use by the industries, can be used to map the groundwater intensive Region in the country. The output can be used in comprehensive assessment of the spatial pattern of extraction of groundwater for industrial uses.  
Created At  
16th October , 2018  
Updated At  
 24th October , 2018

# 170. Assessment of increase in depth of tube/borewells

Organisation : Min. of Water Resources

Title : Assessment of increase in depth of tube/borewells

Category : Software

Technology : Software - Web App development

Complexity : Simple

Youtube link :   
https://www.youtube.com/watch?v=Exr0\_Nl1RjY&featur

#### Problem Statement Details

Description  
 A website/mobile app to give water level and other related parameters data as input and generating a water level trend with forecast. Using the minor irrigation census data on Block basis for every 5 years, the trend in changes in the depth of the wells can be studied for selected areas. This will be helpful in ground water studies.  
Created At  
16th October , 2018  
Updated At  
 24th October , 2018

# 171. Parking Spot indicator in vicinity

Organisation : Mahindra&Mahindra(FarmEQ)

Title : Parking Spot indicator in vicinity

Category : Software

Technology : Smart Vehicles

Complexity : Complicated

Youtube link :   
https://www.youtube.com/watch?v=-5k45dmKhzg

#### Problem Statement Details

Description  
 India is the world’s fourth largest automobile market with limited parking spots. Ever-growing number of vehicles causes traffic congestion on most streets and roads. Availability of a low cost connected ecosystem will help identify the nearest parking spot when sought. This will resolve issues related to parking as well as reduce traffic jam instances caused due to improper parking situations.  
Created At  
5th October , 2018  
Updated At  
 24th October , 2018

# 172. Pedestrian Safety Device in automobiles

Organisation : Mahindra&Mahindra(FarmEQ)

Title : Pedestrian Safety Device in automobiles

Category : Hardware

Technology : Smart Vehicles

Complexity : Complex

Youtube link :   
https://www.youtube.com/watch?v=\_UOHwpQwMQE

#### Problem Statement Details

Description  
 Pedestrian death rates are amongst the highest in India as Jaywalking is very common. There is no system integrated with vehicles to detect and prevent this. All safety features currently focus on the occupants of the vehicle. Availability of such a driver assistance system would significantly take down instances of fatal accidents involving pedestrians. It would identify when a jaywalker/bystander moves in the path of the vehicle and instantly deploy measures to evade or brake.  
Created At  
5th October , 2018  
Updated At  
 24th October , 2018

# 173. Aggregation

Organisation : KISAN FORUM PVT LTD

Title : Aggregation

Category : Software

Technology : Agriculture and Rural Development

Complexity : Complicated

Youtube link :   
https://www.youtube.com/watch?v=xN73z1Xoo7o

#### Problem Statement Details

Description  
 The major reason behind farmers being economically challenged is that they do not get the right market price for their produce. Also, the price they pay for inputs considerably higher than the cost at which the inputs are manufactured. There is no application or service in the market which can help farmers come together and buy inputs in a group directly from manufacturers. Or there is no way farmers can form a group and sell their farm produce to FMCGs or other big buyers. An app will help.  
Created At  
12th October , 2018  
Updated At  
 23rd October , 2018

# 174. Farm input calculation

Organisation : KISAN FORUM PVT LTD

Title : Farm input calculation

Category : Software

Technology : Agriculture and Rural Development

Complexity : Simple

Youtube link :   
https://www.youtube.com/watch?v=Y7WSkwc9zkg&featur

#### Problem Statement Details

Description  
 The application of fertilizers and pesticides depends on the soil type, area, crop, pest infestation etc. Most of the farmers do not know the right fertilizer/pesticide to be applied and its correct amount. They end up over-applying the inputs thus causing crop damage, water and soil pollution, high pesticide residue in food.   
  
A mobile application which can identify the correct fertilizer/pesticide and calculate the correct amount to be applied can help farmers overcome this issue.  
Created At  
12th October , 2018  
Updated At  
 23rd October , 2018

# 175. Smart Farm Diary

Organisation : KISAN FORUM PVT LTD

Title : Smart Farm Diary

Category : Software

Technology : Agriculture and Rural Development

Complexity : Simple

Youtube link :   
https://www.youtube.com/watch?v=4vT9aoqMJWk&featur

#### Problem Statement Details

Description  
 Many farmers do not keep account of their expenses. They do not keep a note of expenditure on seed, fertilizer, pesticides, labour, machinery charges, electricity bills etc. If maintained properly, this information can help farmers take many decisions like cutting out unnecessary expenses. If accompanied by various finance options, the smart farm diary can be a very useful tool for farmers.  
Created At  
12th October , 2018  
Updated At  
 23rd October , 2018

# 176. Audio guide for patient regarding doctor prescript

Organisation : Ministry of AYUSH

Title : Audio guide for patient regarding doctor prescript

Category : Hardware

Technology : Healthcare & Biomedical Devices

Complexity : Simple

Youtube link :   
https://www.youtube.com/watch?v=iRYTT8SBppU&featur

#### Problem Statement Details

Description  
 Routinely patients are advised orally health cares like diet, lifestyle and medication dosage and frequency in the patient doctor visit, which is often very difficult for a patient to remember after he goes home.   
  
Doctor’s advice (Audio) to be converted to QR Code and QR code to be pasted on the patients prescription.  
  
A patient can scan the QR code and listen the health care advised by the doctor through mobile app  
Created At  
12th October , 2018  
Updated At  
 23rd October , 2018

# 177. Chat bots builder

Organisation : Ministry of AYUSH

Title : Chat bots builder

Category : Software

Technology : Software - Web App development

Complexity : Simple

Youtube link :   
https://www.youtube.com/watch?v=uLAaRqhOHoI&featur

#### Problem Statement Details

Description  
 A chat bot is often described as one of the most advanced and promising expressions of interaction between humans and machines. “An intelligent chat bot can guide the concerned parents or patients by understanding and assessing the symptoms that the patient is experiencing and identify the care that they need. With the help of a medical chat bot, patients can receive immediate assistance at the touch of their fingertips.” Solution - Development of Voice assisted Chat bots for AYUSH hospitals.  
Created At  
12th October , 2018  
Updated At  
 23rd October , 2018

# 178. Portal/app for transfer of vital data at low BW

Organisation : Ministry of AYUSH

Title : Portal/app for transfer of vital data at low BW

Category : Software

Technology : Software - Web App development

Complexity : Simple

Youtube link :   
https://www.youtube.com/watch?v=ZM-mIs6Pzs0&featur

#### Problem Statement Details

Description  
 The roles and activities of community health workers (CHWs) are tailored to meet the unique needs of the communities they serve. Critically ill patients (Geriatrics , Low Birth weight babies) needs real time monitoring of vital parameters like Temperature monitoring, Oxygen saturation, Blood pressure, Heart rate, blood sugar level. A app is needed to transfer this data at low band width with video streaming  
Created At  
12th October , 2018  
Updated At  
 23rd October , 2018

# 179. Epidemiological survey app Builder

Organisation : Ministry of AYUSH

Title : Epidemiological survey app Builder

Category : Software

Technology : Software - Mobile App development

Complexity : Simple

Youtube link :   
https://www.youtube.com/watch?v=3nnKSki2PhM&featur

#### Problem Statement Details

Description  
 Survey proforma incorporating all the necessary demographic and etiological data etc. may many times extend up to many pages leading to wastage of paper. Sometime, we need apps where there is no net connectivity. An offline APP may be developed so that the recording of data from individual cases may be stored and it may also be having the facility of statistical analysis and consolidating the information in form of charts and graphs.  
Created At  
12th October , 2018  
Updated At  
 23rd October , 2018

# 180. Hospital Finder

Organisation : CDK Global (India)Pvt Ltd

Title : Hospital Finder

Category : Software

Technology : Software - Mobile App development

Complexity : Complex

Youtube link :   
https://www.youtube.com/watch?v=Qf8nyCKtsHc

#### Problem Statement Details

Description  
 During medical emergencies, common people always face problems in deciding which hospital they should visit for required treatment. The wander from one hospital to another in search of medical facility, medicines, blood supply, etc. Hospital Finder will solve this problem by allowing people to search for nearby hospitals on the basis of medical treatment, specialist doctors, medicine/blood availability, etc.  
Created At  
15th October , 2018  
Updated At  
 23rd October , 2018

# 181. Driver alertness detection

Organisation : MindTree

Title : Driver alertness detection

Category : Software

Technology : Smart Vehicles

Complexity : Complex

Youtube link :   
https://www.youtube.com/watch?v=r39Uo2LnV90&featur

#### Problem Statement Details

Description  
 A lot of deaths happening are because of road accidents. So to prevent these accidents, a driver alertness detection system must be made.  
Created At  
22nd October , 2018  
Updated At  
 22nd October , 2018

# 182. Proactive Disaster Detection

Organisation : MindTree

Title : Proactive Disaster Detection

Category : Software

Technology : Miscellaneous

Complexity : Complex

Youtube link :   
https://www.youtube.com/watch?v=wvS5xFcKVVk

#### Problem Statement Details

Description  
 Detect high probability of large scale natural disasters and eventually model the post disaster spread dynamics.  
  
One approach could be to use technology to process the satellite data to predict the likelihood of the disaster which then can be used as a warning tool for monitoring and detecting the disaster.  
  
Also, with the satellite and human generated data, system should model the dynamics of the disaster spread, which will help to manage the disaster efficiently.  
Created At  
22nd October , 2018  
Updated At  
 22nd October , 2018

# 183. Identity (KYC) secure sharing

Organisation : MindTree

Title : Identity (KYC) secure sharing

Category : Software

Technology : Security & Surveillance

Complexity : Complicated

Youtube link :   
https://www.youtube.com/watch?v=A5DeMlF6zU8&featur

#### Problem Statement Details

Description  
 Frequent cases of personal data leakage has brought back into focus the security issues with different KYC programs.   
  
A consumer is expected to provide his personal identity for authentication by different agencies, which is known as KYC, but there is no restriction on how much data to be shared with the agencies needing the KYC.  
  
Consumer should have full control over where and how much data is being used by the third parties. We can use a public Blockchain based solution to overcome all these.  
Created At  
22nd October , 2018  
Updated At  
 22nd October , 2018

# 184. Drone based medical facility

Organisation : MindTree

Title : Drone based medical facility

Category : Hardware

Technology : Robotics & Drones

Complexity : Complex

Youtube link :   
https://www.youtube.com/watch?v=9K0FX2tDfv4&featur

#### Problem Statement Details

Description  
 Use drones to deliver critical medicines ,blood, blood derivatives to rural health centers in India. There would be some centralized distribution centers from where the drones will be launched and retrived. The drones should autonomously perform the delivery and return back to the base.  
Created At  
22nd October , 2018  
Updated At  
 22nd October , 2018

# 185. Intelligent Food packaging

Organisation : ITC Limited

Title : Intelligent Food packaging

Category : Hardware

Technology : Miscellaneous

Complexity : Simple

Youtube link :   
https://www.youtube.com/watch?v=hbFlYb2crso

#### Problem Statement Details

Description  
 TITLE: Intelligent Food Packaging: Time – Temperature Sensors to deliver Super-Safe Frozen Shrimp Meat Products   
  
  
  
1. BACKGROUND: To deliver highly relished and supersafe prawns to the consumer, rapid freezing after processing and storage at low temperatures is essential for prawn and prawn products in order to eliminate oxidation, denaturation of proteins, sublimation and recrystallization of ice crystals. Temperature increase of frozen product will result in off-flavors, rancidity, dehydration, weight loss, and loss of juiciness, drip loss, toughening, microbial spoilage and autolysis of the product. Therefore, it is absolutely critical that frozen conditions are maintained during transportation, storage, and in retail stores. This needs to be verifiably demonstrated to the consumer during the time of purchase. This is feasible only by a bio-sensor which will demonstrate the actual state of the product during its shelf-life.  
  
  
  
2. PROBLEM DESCRIPTION: Prawns may be frozen–thawed many times before being consumed. The Frozen prawns may get thawed (core temperature ~ 0 deg C) and refrozen during transportation and repackaging. An increase in the freeze–thaw cycles, greater than -180C, results in augmenting Thiobarbituric acid (TBA) value and cutting force while lowering the salt soluble protein (SSP) value. This leads significant deterioration in product quality. The prawns can be freeze–thawed only up to 2 cycles. In addition, the product will be spoiled if there is a slow re-freezing time which steeply increases the bacterial count in the prawns. Therefore, it is important demonstrate the temperature fluctuations and actual state of the monitored packed frozen meat to the consumer illustrating the product quality and safety.  
  
  
  
  
  
3. PROBLEM STATEMENT: To build a low-cost Time Temperature visual biosensors which will change it basic characteristics, such as color, and ensure ongoing communication with shoppers. This should result in maximizing freshness, minimize waste, and augment the brand value of frozen shrimp products.   
  
  
  
4. PROJECT DELIVERABLES  
  
  
  
(a) To develop a time series data logger which will be both visual and machine readable. It should be user friendly, can be calibrated to suit products with varying shelf-life, and compatible with existing other machine-logging technologies  
  
  
  
(b) Desired protypes (For Testing): The built prototype should be accurate, precise, and reproducible in temperature monitoring, especially with increasing temperature from – 18 deg. C., to ambient condition. Changes in characteristics, such as color (or) chemical properties, should be faster with increasing temperature and preferably capture the entire shelf-life. Integration of technology using existing raw materials. process, and products, such as paper and films, and printing will be added advantage  
  
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Created At  
16th October , 2018  
Updated At  
 22nd October , 2018

# 186. Collective Threat Intelligence Framework

Organisation : Quick Heal

Title : Collective Threat Intelligence Framework

Category : Software

Technology : Security & Surveillance

Complexity : Complicated

Youtube link :   
https://www.youtube.com/watch?v=ly\_0WjDvdD8

#### Problem Statement Details

Description  
 Adopting a collaborative approach to sharing the threat intelligence has its own benefits. The volume of threat incidences along with sophistication of techniques used demands implementation of effective protective system. You always see only view through one angle and no one has the full picture.  
  
Ability to find needle in a haystack gives the notion of today's threat landscape.  
  
The system should build capability of collective threat intelligence to prioritize, focus and detect threats.  
Created At  
8th October , 2018  
Updated At  
 22nd October , 2018

# 187. Mechanism to save medines from getting wasted

Organisation : MindTree

Title : Mechanism to save medines from getting wasted

Category : Software

Technology : Healthcare & Biomedical Devices

Complexity : Complicated

Youtube link :   
https://www.youtube.com/watch?v=QWQrqwKTWXE&featur

#### Problem Statement Details

Description  
 Frequently the medicines remain unused with people. In those cases medicines do get wasted.   
  
The proposal brings in usage of technology to make the medicines reusable in seamless and hassle free manner.  
Created At  
22nd October , 2018  
Updated At  
 22nd October , 2018

# 188. RADAR on Roads

Organisation : MindTree

Title : RADAR on Roads

Category : Hardware

Technology : Security & Surveillance

Complexity : Complex

Youtube link :   
https://www.youtube.com/watch?v=WkKWqGakEx8

#### Problem Statement Details

Description  
 There will be huge pile of vehicles waiting to pass through the toll booths over weekends around many cities. Though the NHAI has introduced FASTag RFID stickers, it still doesn’t address the issue. In many places its still not functional and at few it’s partially working. Places where it’s working, the vehicle needs to go slow so the sensors to detect the sticker and deduct the toll fare.  
  
What if we had a system which is similar or better to one being used in Dubai?  
Created At  
22nd October , 2018  
Updated At  
 22nd October , 2018

# 189. Mask Free Air

Organisation : MindTree

Title : Mask Free Air

Category : Hardware

Technology : Miscellaneous

Complexity : Complicated

Youtube link :   
https://www.youtube.com/watch?v=NkQsBIQCzDY

#### Problem Statement Details

Description  
 We have seen cases of bad air quality indices across Indian metro and major cities. Last year, Delhi was at its worst! Residents were using masks wherever they go.  
  
How do we reduce the smog? How can we commercialize the collected carbon as well?  
Created At  
22nd October , 2018  
Updated At  
 22nd October , 2018

# 190. TechAgri

Organisation : MindTree

Title : TechAgri

Category : Software

Technology : Agriculture and Rural Development

Complexity : Complex

Youtube link :   
https://www.youtube.com/watch?v=VYhR2hU6HD8

#### Problem Statement Details

Description  
 Our farmers are well too behind in using technologies and advanced methodologies to grow the crops. Every year we see that the farmers are committing suicide due to the bad crop (various reasons), or bad rates for the crops and loan sharks. What if there is a platform for the farmers, which is easy to understand and use, to enable them to utilize the power of technology in their farming?  
Created At  
22nd October , 2018  
Updated At  
 22nd October , 2018

# 191. High Performance Network Intrusion Detection Engine

Organisation : Quick Heal

Title : High Performance Network Intrusion Detection Engine

Category : Software

Technology : Security & Surveillance

Complexity : Complicated

Youtube link :   
https://www.youtube.com/watch?v=ccIAkrJ96Jw

#### Problem Statement Details

Description  
 Develop a network intrusion detection system with high network throughput.  
  
  
  
The system should scan, classify and monitor the network traffic in realtime without affecting the network throughput.  
  
  
  
Following are the features  
  
- Real time traffic analysis  
  
- Protocol analysis  
  
- Content searching  
  
- Detect variety of attacks and probes  
Created At  
8th October , 2018  
Updated At  
 22nd October , 2018

# 192. Efficient Farming

Organisation : MindTree

Title : Efficient Farming

Category : Software

Technology : Agriculture and Rural Development

Complexity : Complex

Youtube link :   
https://www.youtube.com/watch?v=ox-Wjv5U-rU&featur

#### Problem Statement Details

Description  
 A mobile application that the farmers can use to hire tractors as well as other mechanizations at a nominal amount all using their mobile phones . This would not only help them avoid manual labor but can be also be considered as an important step to encourage this profession.  
Created At  
22nd October , 2018  
Updated At  
 22nd October , 2018

# 193. Smart and Dynamic Time Table Management System

Organisation : SSEPL Skills Pvt Ltd.

Title : Smart and Dynamic Time Table Management System

Category : Software

Technology : Software - Web App development

Complexity : Simple

Youtube link :   
https://www.youtube.com/results?search\_query=https

#### Problem Statement Details

Description  
 This platform would be generating time table for a college/school/institution based on the input of trainer’s skills, trainers load hour, session duration, no. of days of training. This platform would generate the time table in the start of academic session based on the provided input. Dynamic nature of this platform would be in adjusting the vacant classes in case of trainers’ absence due to any reason. This platform should automatically allocate the free classes to appropriate trainer of same  
Created At  
29th September , 2018  
Updated At  
 22nd October , 2018

# 194. Development of 30 Kg Payload capacity multicopter

Organisation : Bharat Forge Ltd.

Title : Development of 30 Kg Payload capacity multicopter

Category : Hardware

Technology : Robotics & Drones

Complexity : Complex

Youtube link :   
https://www.youtube.com/watch?v=aS1u4bHdZAg&pbjrel

#### Problem Statement Details

Description  
 This project is for Design and Development of Multicopter for additional Payload Capacity of 30 kg. This copter must have endurance of minimum 45 minutes and should fly at 800 - 1000 meters above take off ground. decision regarding number of arms for the copter and material selection is can be taken by students.  
Created At  
10th October , 2018  
Updated At  
 22nd October , 2018

# 195. Steam Trap Health Monitoring

Organisation : Forbes Marshall Pvt. Ltd

Title : Steam Trap Health Monitoring

Category : Hardware

Technology : Miscellaneous

Complexity : Complicated

Youtube link :   
https://www.youtube.com/watch?v=KMHtWLayJjI

#### Problem Statement Details

Description  
 To develop a steam trap failure detection system which can detect steam trap failures remotely, accurately and in real-time. The solution should be non-intrusive and should make use of wireless mode of communication. (A video of one kind of steam trap operation is shared)  
Created At  
16th October , 2018  
Updated At  
 22nd October , 2018

# 196. Drone Doctors

Organisation : ITC Limited

Title : Drone Doctors

Category : Software

Technology : Robotics & Drones

Complexity : Complex

Youtube link :   
https://www.youtube.com/watch?v=xjY58OAXUTs

#### Problem Statement Details

Description  
 TITLE: "Drone Doctors: Deep Learning of plant topography for predictive / prescriptive analysis against pest and diseases".  
  
  
  
BACKGROUND: Crop losses owing to pest & diseases are inherent in Indian agriculture with the annual loss of 15-25% of productivity. Pest & diseases are complex, crop/region specific, seasonal, epidemic/endemic, which require integrated approaches to manage the loss. Due to the level of complexity, diagnosis for preventive measures are challenging, particularly our inability to (fore)see the pest/disease occurrence and their life cycle, while the level of difficulty raises with the size of land holdings. Due to the poor visibility of pest and disease occurrences, our ability to integrate and use the data for preventive/prescriptive measures has been the challenge leading to continuous productivity loss.  
  
  
  
PROBLEM DESCRIPTION: Crop loss is generally diagnosed by the symptoms developed by pest and diseases, while manual diagnosis has a very limited scope in identifying the damaged plant parts, while recognizing the pattern of pest/disease distribution almost close to impossible in large area. Drone based scanning the large area using both visible and near-infrared light, could help track changes in plants at large scale and identify the distribution pattern very precisely. Further, an artificial intelligence (AI) driven software could process the images; integrate the existing knowledge and develop the solutions in real-time. In addition, such approach could also open the scope of predictive analysis to execute automate alert to the farmers, potentially improve the crop productivity to more than 20%.  
  
  
  
PROBLEM STATEMENT: To build a custom drone and integrated software with AI for predictive/prescriptive model against pest and diseases in crop plants.  
  
  
  
The proposed requirements are as follows,  
  
A: HARDWARE  
  
1. Drone integrated with IR lenses  
  
2. Communication device for data transmission to cloud  
  
  
  
B. SOFTWARE  
  
1. “Intelligent” Software that process the digital images; extract the binaries; categorize them to diagonise the biotic stress; integrate with existing knowledge; execute the predictive / prescriptive analysis and generate alerts for communication.  
  
2. Cloud environment with management dashboard  
  
  
  
PROJECT DELIVERABLES:  
  
1. An aerial survey and data collection system, fully functional with visible and IR lenses.   
  
2. Managed communication of the images/data to the cloud.  
  
3. AI driven Software – fully functional for predictive and prescriptive analytics  
  
4. Alert system for users (including farmers) in various formats including RSS feeds (for news channels) and mobile applications.  
  
  
  
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Created At  
16th October , 2018  
Updated At  
 22nd October , 2018

# 197. Patient Case Similarity

Organisation : ezDI

Title : Patient Case Similarity

Category : Software

Technology : Healthcare & Biomedical Devices

Complexity : Complex

Youtube link :   
https://www.youtube.com/watch?v=skDcDRBdfNI

#### Problem Statement Details

Description  
 The objective of patient case similarity is to identify similar patients based on their medical reports. Identification of similar patient cases be useful for improving patient outcome, for treatment or drug recommendation to a new patient, prediction of clinical outcome, clinical decision support, research on those cases.  
  
  
  
Task: Applying machine learning algorithms to find similar patient cases from given dataset. You can refer youtube link and documentations attached to it for more details.  
Created At  
11th October , 2018  
Updated At  
 22nd October , 2018

# 198. Inconsistency Detection in Medical Annotation

Organisation : ezDI

Title : Inconsistency Detection in Medical Annotation

Category : Software

Technology : Healthcare & Biomedical Devices

Complexity : Complicated

Youtube link :   
https://www.youtube.com/watch?v=vx4PNSpE1wg

#### Problem Statement Details

Description  
 Text in clinical documents is annotated to tag the words or phrases as problems, diagnoses, procedures, drugs etc and identify the relationship between them. Semantically similar words can be annotated differently by different annotators due to ambiguity in understanding the guidelines, incomplete experience or human errors. Identifying inconsistencies can help in improving the data quality You need to develop a tool to display these similar entities which have different patterns of annotations.  
Created At  
11th October , 2018  
Updated At  
 22nd October , 2018

# 199. India Vs Pollution

Organisation : CDK Global (India)Pvt Ltd

Title : India Vs Pollution

Category : Software

Technology : Miscellaneous

Complexity : Complex

Youtube link :   
https://www.youtube.com/watch?v=n8S-ewKNSbk

#### Problem Statement Details

Description  
 Every day we come across several sources of pollution, polluting the very basics of our lives- Rivers, Land, Air and Noise. We know nothing about who/where to report it and how. We suggest an Innovative way to identify the sources of pollution in your area, get it prioritized through people votes, escalate it to the concerned authorities, keep a track of the progress and get notified of the actions taken. It will provide an End-2-End tool to battle pollution democratically partnering with Govt.  
Created At  
15th October , 2018  
Updated At  
 22nd October , 2018

# 200. Ambulance Services

Organisation : CDK Global (India)Pvt Ltd

Title : Ambulance Services

Category : Software

Technology : Healthcare & Biomedical Devices

Complexity : Complex

Youtube link :   
https://www.youtube.com/watch?v=ui4o6zOdA7k

#### Problem Statement Details

Description  
 Ambulance services are important for Health & Medical facilities. Requirement is to build a mobile app similar to Ola / Uber cab services. But it will be for Ambulance services. This app will have Ambulance driver’s register their availability and location. Both Executive at Emergency Helpline and User’s on the other hand on App’s Client interface will book an ambulance.   
  
This will promise a fast and reliable ambulance service in case of emergency.  
Created At  
15th October , 2018  
Updated At  
 22nd October , 2018

# 201. Birth/Death Registration Integration With Services

Organisation : CDK Global (India)Pvt Ltd

Title : Birth/Death Registration Integration With Services

Category : Software

Technology : Software - Mobile App development

Complexity : Simple

Youtube link :   
https://www.youtube.com/watch?v=QDZz3Yq7YTM&t=24s

#### Problem Statement Details

Description  
 There are different services which are linked to Birth and Death of an individual. If these services are integrated together it will help individuals. Maternity Nursing home register’s child birth to Municipal Office Then Parent / guardian can one time enter the name of their child and get a print of Birth Certificate after few days. No need to visit MO. In case of Death registration at MO then build a system which will notify all tear down services to update death status of the individual.  
Created At  
15th October , 2018  
Updated At  
 22nd October , 2018

# 202. Common Corporate Social Responsibility(CSR) Portal

Organisation : CDK Global (India)Pvt Ltd

Title : Common Corporate Social Responsibility(CSR) Portal

Category : Software

Technology : Software - Web App development

Complexity : Simple

Youtube link :   
https://www.youtube.com/watch?v=09hpnAUmtuI&t=20s

#### Problem Statement Details

Description  
 Currently most organisation have their own CSR activities and perform social events separately.  
  
Due to lack of resources and budgets, it limits their ability to perform these activities on larger scale or remote areas. Also other corporates may not be aware of such events, so that they can participate as well.  
  
So idea is to develop an organised Common CSR portal where different corporates or individuals can come together and collectively provide valuable service to society.  
Created At  
15th October , 2018  
Updated At  
 22nd October , 2018

# 203. Locate faults in Power Distribution Networks

Organisation : ABB GIS Pvt Ltd

Title : Locate faults in Power Distribution Networks

Category : Software

Technology : Miscellaneous

Complexity : Complex

Youtube link :   
https://www.youtube.com/na

#### Problem Statement Details

Description  
 Over the time, cities have built the power distribution asset in phases with varied product technologies. At the time of faults in the physical infrastructure, the distribution utilities take huge time to identify and pin point the fault in the physical infrastructure (especially the cable faults, which is mix of overhead and underground infra). Also, faults in networks are catered to only after they occur. A low cost prediction solution will help in better planning for ad-hoc maintenance.  
Created At  
17th October , 2018  
Updated At  
 22nd October , 2018

# 204. Online Adaptive Assessment Platform

Organisation : SSEPL Skills Pvt Ltd.

Title : Online Adaptive Assessment Platform

Category : Software

Technology : Software - Web App development

Complexity : Simple

Youtube link :   
https://www.youtube.com/watch?reload=9&v=N0T851LPU

#### Problem Statement Details

Description  
 Aspirants/Students can be assessed on different fields using this website. Fields can be Reasoning, Aptitude, Technical MCQ, Coding etc. This will be an online platform with questions at different levels (Difficulty). Candidate would start at assessment with a medium difficulty question and depending on its response, the platform should decide the next level of questions to be shown (level would increase or decrease as per response). Each question would be assigned a weightage and time duratio  
Created At  
29th September , 2018  
Updated At  
 20th October , 2018

# 205. A seed sowing machine for Zero-Till farming

Organisation : Saguna Rural Foundation

Title : A seed sowing machine for Zero-Till farming

Category : Hardware

Technology : Agriculture and Rural Development

Complexity : Complex

Youtube link :   
https://www.youtube.com/watch?v=o7TUzoTFuQA&featur

#### Problem Statement Details

Description  
 The machine should operate on a permanent raised bed of 100 cm width which can sow seeds with fertilizer in 5 rows at 25 cm apart. Seeds - rice, gram, pea, groundnut, bajra, maize, Val, etc. Mechanism should be preferably impact dibbler or it should make very thin slit of max depth of 30-40 cm. It should cover the seeds after sowing and be operated by 1-2 people either manually or by 1 hp power and sow 0.6 to 1 ha in 8 hours. Potential of it being self-driven to get higher speed.  
Created At  
10th October , 2018  
Updated At  
 19th October , 2018

# 206. Low cost & smart cooling system for tractor cabin

Organisation : Mahindra&Mahindra(FarmEq)

Title : Low cost & smart cooling system for tractor cabin

Category : Hardware

Technology : Agriculture and Rural Development

Complexity : Complicated

Youtube link :   
https://www.youtube.com/watch?v=8kazDWnvBkI

#### Problem Statement Details

Description  
 intent is to a design a smart cabin & cooling system for the tractor that would employ a very thoughtful design of a. cabin ensuring all round visibility b. Alternatively, new innovative concepts of cooling without a cabin can also be thought of, cooled seat c. Smart cooling system d. a smart cooling algorithm e. low cost design f. carbon footprint should be at least 50% less and should be compatible for future electric tractors  
Created At  
28th September , 2018  
Updated At  
 19th October , 2018

# 207. Real Time Mapping of Epidemic Spread

Organisation : Thermo Fisher

Title : Real Time Mapping of Epidemic Spread

Category : Software

Technology : Healthcare & Biomedical Devices

Complexity : Complex

Youtube link :   
https://www.youtube.com/watch?v=CZ-yRbfrMT4&featur

#### Problem Statement Details

Description  
 We envision a simple portal which shall provide real time data on how an epidemic is and can spread. Real time status and alerts will be the primary objective of this project.   
  
  
  
To achieve this objective, we will need to build layers of crowd sourced data that will add up to provide rich real time status of an epidemic spread as it happens.  
Created At  
10th October , 2018  
Updated At  
 15th October , 2018

# 208. Personal Health Influencers through social network

Organisation : India Health Link Pvt Ltd

Title : Personal Health Influencers through social network

Category : Software

Technology : Software - Web App development

Complexity : Complicated

Youtube link :   
https://www.youtube.com/watch?v=HxdFjL71lmg&featur

#### Problem Statement Details

Description  
 Build an API for IHL users (from IHL platform) to choose/select their friends/others from facebook, LinkedIN, whatsapp, others to form a group to play a challenge like average no of steps in a month, healthy food habits, health vitals (decrease in weight/BP etc.Gamify user experience to win rewards, badges etc.  
Created At  
3rd October , 2018  
Updated At  
 15th October , 2018

# 209. Smart body posture recognition & Guiding system

Organisation : India Health Link Pvt Ltd

Title : Smart body posture recognition & Guiding system

Category : Software

Technology : Healthcare & Biomedical Devices

Complexity : Complicated

Youtube link :   
https://www.youtube.com/watch?v=\_\_N6D3eydq4&app=de

#### Problem Statement Details

Description  
 We have a self service wellness KIOSK that measures health vital parameters like BMI, BMC, BP, ECG, Pulse, Temp. And it designed to be non-assisted while user measures the vitals. A right body posture yields a correct result. We wanted the system should capture the image of the uses body posture like hand, leg etc via camera and through image processing; Compare the required postures for particular test, Analyse and guide users to have right posture in case the test is not carried out proper  
Created At  
3rd October , 2018  
Updated At  
 15th October , 2018