



**SHARINEE**

<Hackathon-Theme-Sheet>

2022-05-04



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### **Theme 1: Disaster Management**

#### **Background:**

Disasters like flood, landslides, droughts, flash floods, cyclones and many more extract a heavy toll of life. For instance,

Assam is reeling under floods, with heavy rainfall and landslides affecting lives in many districts. The flood situation in the state deteriorated with the number of affected increasing to over 7 lakhs in 27 districts and the toll rising to 10.

#### **Task:**

Develop a solution for preventing, responding to and recovering from natural disasters with an emphasis on individual health and community well-being.

The solution (developed during this hackathon for the above-mentioned theme) should contribute to the disaster management preparedness.

#### **Guidelines:**

- 1) Brainstorm your idea/solution
- 2) Prepare a ppt for the same
- 3) PPT should cover:
  - Overview of solution
  - Architectural design/ Idea Approach details
  - Information-flow diagram
  - Prototype demo (if possible)
  - No. of slides should be 5-10.
- 4) 2 hr time for preparation of solution.
- 5) 10 minutes time for Presentation.

#### **Parameters For Evaluation:**

- Creativity and originality
  - Potential social impact of the solution
  - Business opportunity
  - Quality of the presentation
  - Feasibility of the solution
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### **Theme 2: Waste Management**

#### **Background:**

With increasing populations, changing policy requirements, new sustainability and recycling goals and improved technology departments, municipalities across the globe are joining the “smart cities” movement to become more efficient in managing solid waste.

The improvement of the urban waste collection service and, in general, the achievement of a more efficient management of the waste, is one of the main challenges that the cities face, especially due to the population growth. Thus, smart waste management is a key factor of smart cities.

#### **Task:**

Design a smart waste collection system and helps citizens to segregate the various types of solid waste they want to dispose and the municipal authorities to efficiently collect the same.

The system should can be a smart dustbin, mobile/webapp or any feasible technology.

#### **Guidelines:**

- 6) Brainstorm your idea/solution
- 7) Prepare a ppt for the same
- 8) PPT should cover:
  - Overview of solution
  - Architectural design/ Idea Approach details
  - Information-flow diagram
  - Prototype demo (if possible)
  - No. of slides should be 5-10.
- 9) 2 hr time for preparation of solution.
- 10) 10 minutes time for Presentation.

#### **Parameters For Evaluation:**

- Creativity and originality
  - Potential social impact of the solution
  - Business opportunity
  - Quality of the presentation
  - Feasibility of the solution
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### Theme 3: Pollution Control

#### Background:

With pollution levels in India cities beyond permissible levels, it has become a major environmental issue which needs to be curbed. Pollution can cause long-term and short-term health effects. It's found that the elderly and young children are more affected by air pollution. Damage to crops, water pollution and many more issue are bringing disastrous consequences for people of India and around the world.

#### Task:

Brainstorm on solutions to the worsening air quality or water quality or crop protection from pollution.

The solution can suitably be IOT-driven and tackle any one of the above-mentioned issues.

(It can be a mobile/webapp too.)

#### Guidelines:

- 11) Brainstorm your idea/solution
- 12) Prepare a ppt for the same
- 13) PPT should cover:
  - Overview of solution
  - Architectural design/ Idea Approach details
  - Information-flow diagram
  - Prototype demo (if possible)
  - No. of slides should be 5-10.
- 14) 2 hr time for preparation of solution.
- 15) 10 minutes time for Presentation.

#### Parameters For Evaluation:

- Creativity and originality
  - Potential social impact of the solution
  - Business opportunity
  - Quality of the presentation
  - Feasibility of the solution
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### Theme 4: Road Safety

#### Background:

Total 3,564 road accidents occurred in India due to potholes in the year 2020, which is 1, 211 accidents less than last year, the government informed Parliament on Thursday 2, 2022.

the highways ministry introduced several safety measures to prevent road accidents on National Highways in the wake of India ranking 3rd across the 199 countries, as reported by the world road statistics, 2018.

#### Task:

Brainstorm on solutions to ensuring road safety with view of accidents caused by potholes. Pothole detection and removal should be included.

The solution can suitably be IOT-driven and tackle any one of the above-mentioned issues.

(It can be a mobile/webapp too.)

#### Guidelines:

- 16) Brainstorm your idea/solution
- 17) Prepare a ppt for the same
- 18) PPT should cover:
  - Overview of solution
  - Architectural design/ Idea Approach details
  - Information-flow diagram
  - Prototype demo (if possible)
  - No. of slides should be 5-10.
- 19) 2 hr time for preparation of solution.
- 20) 10 minutes time for Presentation.

#### Parameters For Evaluation:

- Creativity and originality
  - Potential social impact of the solution
  - Business opportunity
  - Quality of the presentation
  - Feasibility of the solution
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### Theme 5: Public Transport

#### Background:

**Increased use of public transportation can help reduce air pollution** and the health benefits that accompany it. Public transportation produces far fewer quantities of air pollutants.

Today travelling through public transport in city became a hectic job. Commuter doesn't get any idea of current location of bus or exact timing of arriving bus. So, commuter have to wait for a bus-on-bus stop for several minutes sometimes hours. Spending such valuable time on bus stop without knowing any information of bus is not acceptable at all. **Traveller must be aware about upcoming buses timings or location on bus stop. So that he/she can plan further activities according to time required for travelling.**

#### Task:

Brainstorm on solutions for tracking city busses or any public transportation for the users. Reference- whereismytrain App

#### Guidelines:

- 21) Brainstorm your idea/solution
- 22) Prepare a ppt for the same
- 23) PPT should cover:
  - Overview of solution
  - Architectural design/ Idea Approach details
  - Information-flow diagram
  - Prototype demo (if possible)
  - No. of slides should be 5-10.
- 24) 2 hr time for preparation of solution.
- 25) 10 minutes time for Presentation.

#### Parameters For Evaluation:

- Creativity and originality
  - Potential social impact of the solution
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  - Quality of the presentation
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### **Theme 6: Green Tech**

#### **Background:**

In Southeast Asia, food waste is discharged daily from factories, restaurants, supermarkets, etc. This waste has potential to be reused as an organic resource providing it can be transformed with the correct technology. It is found that there is discharge of food waste daily from various types of places i.e. restaurants, factories, supermarkets etc.

#### **Task:**

Collection of the food waste from such areas and categorizing them to what they can be used into is a major task for this problem statement.

The solution can suitably be software based.

#### **Guidelines:**

- 26) Brainstorm your idea/solution
- 27) Prepare a ppt for the same
- 28) PPT should cover:
  - Overview of solution
  - Architectural design/ Idea Approach details
  - Information-flow diagram
  - Prototype demo (if possible)
  - No. of slides should be 5-10.
- 29) 2 hr time for preparation of solution.
- 30) 10 minutes time for Presentation.

#### **Parameters For Evaluation:**

- Creativity and originality
  - Potential social impact of the solution
  - Business opportunity
  - Quality of the presentation
  - Feasibility of the solution
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