IoT PROBLEM STATEMENT COMPETITION

PROBLEM STATEMENT:

You are part of the R&D team in a leading IoT product development company. Your responsibility as an application development engineer is to provide solutions to various problems faced by the industry.

THE SPECIFIC PROBLEM ASSIGNED TO YOU AND YOUR TEAM IS AS FOLLOWS:

Case 5. Smart weather monitoring and Real time alert system using IoT

Continuously monitor a specific area with suitable sensors and gather the data of the atmosphere in real time and create effective alert system to warn people live in and around that surrounding for effective measures and gather the data for future study/reference.

NOTE: Team has to choose their specific inputs/ outputs, set up suitable exchanges between the server and the nodes, keep track of the sequence and number of operations, develop suitable web and app interfaces to suitably control and track the outcome of tasks / operations.

Based upon the team finalization, a team member has to start collecting the necessary data/ resources required.

TEAM ROLE ALLOCATION GUIDELINES:

This is a team based project so working in a team and cooperating with a team leader is very essential this is how you are going to work every day in your Industry environment.

Team Leader is responsible for role allocation all the team members should sit together to get the necessary roles based upon their technical skills and area of interest.

ROLES BASICALLY NEEDED ARE:

1. Research Member
2. Application Architect
3. Solutions Specialist/ Architect
4. Software Engineer
5. Embedded Systems Engineer
6. Product Manager
7. Business Development Manager
8. Sales Specialist

NOTE: Team Leader is responsible for role allocation and addition of roles can be assigned based on the problem statement and requirements. The same role can be assigned to maximum of 3 members in a team.

TASKS INVOLVED ARE:

0. Literature Review
1. Product concept
2. Technical Data collection
3. Product Benchmarking
4. Product concept validation
5. Product Design
6. Product Development
7. PDCA Analysis/ report
8. IEEE Paper preparation

EVALUATION CRITERIA

The team's presentations and IEEE paper preparations will be evaluated based upon following parameters

1. Team work
2. Quality of Technical data
3. Concept validation
4. Product Demo
5. Market analysis
6. Sales strategy
7. Presentation Skills

You and your team are required to analyze the problem statement and come up with innovative, practical, cost effective and implementable solutions.

METHODOLOGY:

1. Team formation – Allocate roles among team by understanding each team member's strength/weaknesses.

2. Basic literature survey – Collect related research journals and related data from Internet/experts/materials provided.

3. Design conceptualization – Develop various technical design ideas and discuss among team to finalize one to work.

4. Product Implementation.

5. Writing the IEEE paper – Strictly follow the format of the paper given to create your team IEEE Paper.

6. Editing and proof reading – Keep Content quality extremely good and use references effectively.

7. Preparation of presentation – Be precise and focus only on technology you are suggesting.

FINAL DELIVERABLES:

1. Team Organization Structure

2. Standard IEEE technical paper

3. Short technical presentation of 10-15 slides explaining the proposed solution

- Problem Statement Definition
- Team Structure & Roles – Preferably in Organization chart.
- Current Market trends/requirements for given segment/technology category
- Competitor Bench Marking Data
- Technology options considered & why?
- Concept Validation
- Solution to the problem
- SWOT Analysis
- Estimated Cost of the proposed product/technology
- Marketing Concept

DAILY DELIVERABLES

- Day 2: Team sheet with Role Allocation
- Day 3: IEEE Abstract (Not more than 350 words)
- Day 4: Product Benchmarking (Min 3 products with comparison and team observation)
- Day 5: Product Design (Application Architecture with Explanation)
- Day 6: PDCA Analysis/ report
- Day 7: Draft IEEE Paper.