ML/AI PROBLEM STATEMENT COMPETITION

PROBLEM STATEMENT:

You are part of the young vibrant startup team working on machine learning and AI tools to make better products that solves new age consumer problems. Your responsibility as a team is to provide solutions to various problems faced by the industry/consumer.

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

Case 9. Twitter Sentiment / Social Media Analysis.

In 2008 the entire US election was correctly predicted by the AI based algorithm from twitter data. Build a web page that asks for a keyword any you need to identify the sentiment of that keyword in the public.

GUIDELINES : Team has to finalize their training data sets to train your own model, Come up with diff approaches involves NLP/ ML/ DL techniques to solve the problem, You are free to use any open source libraries, You are free to use any external data if required.

Based upon the team finalization, a team members 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. NLP Engineer
5. ML / AI Manager
6. Business Development Manager
7. 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. Model concept
2. Technical Data collection
3. Algorithm Benchmarking
4. Concept validation
5. Pipeline Design
6. Model Development
7. Hosting the application on the server
8. PPT / 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 data collection and manipulation.
3. Concept validation
4. Working 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. Concept Implementation – Use diff NLP/ML/DL tools and techniques to implement concept.
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. Standard IEEE technical paper
2. Short technical presentation of 10-15 slides explaining the proposed solution
    - Problem Statement Definition
    - Team Structure & Roles – Preferably in Organization chart.
    - Problems faced by the client
    - Competitor Bench Marking Data
    - Technology options considered & why?
    - Concept Validation
    - Solution to the problem
    - How to improve scalability
    - Estimated time required and how to improve accuracy (Next steps)
    - 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: Different Product pipeline and their reason
Day 6: Architectural Design
Day 7: Software Development
Day 8: Final Deployment