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PD 09

CC&NLP Theory Assignment -

Q1) State various characteristics of cognitive system and explain where cognitive system are suitable

⇒ characteristics of cognitive systems are:-

1) Adaptive
2) Interactive
3) Iterative and stateful
4) Contextual.

cognitive systems can analyze structured and unstructured data from diverse information sources. At the same time, these systems are able to take context into account and consider conflicting information, which enables them to formulate optional solution to questions and problems

Q2 Explain the following types of machine learning, mention one application of each type.
1) Supervised learning.
2) Unsupervised learning
3) Semi-supervised
4) Reinforcement.

=) 1) Supervised learning:- It is the task of infuring a function from labelled training data that consist set of training example. It is extremely powerful. The training data is a smaller part of the algorithm a basic idea of the problem, solution & data points to be dealt with.
eg: Bio informatics.

2) Unsupervised learning: It describes a class of problems that involue using a model to describe or extract relationships in data. It operates upon only the input data without o/p or target variables.

3) Reinforcement learning:- It dscribes a class of problems where an agent operates in an environment and must learn operate using feedback manufacturing, inventory management, power systems.

4) semi-supervised learning :- It is a supervised learning where the training data contains very few labeled examples and a large no. of unlabeled examples.

Q3) What is Big data? How is It related with cognitive system?

=) It is a field that creats ways to analyze systemadically extract information from, or otherwise deal with data set that are too large or complex to be dealt with by tradisional data preprocessing application software Data decision insights are providing businesses with new competitive

advantages, enabling them to gain insights into their customer. A wide range of open source tools and resources to spin new insights on all the data at their disposal.

Q4) What is a chatbot? Explain 5 design parameters for chatbot.

→ Chatbot can be defined as AI based program that simulates human conversation. They are also known as digital assistants that understand human capabilities Both interpret and process the user requests and given prompt relevant answers.

Design parameter for chatbot are:-

1) Identify chatbot goals.
2) Do some user research
3) Map the Topics.
4) Choose the right tools
5) Design user flow
6) Write the code.