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TASK

1. What is the Difference between DSS, Artificial Intelligence, Expert System? Then Give an example!
2. In the decision-making process-Design Phase-modeling stage. What is the difference between qualitative and quantitative forms?
3. Look for articles/papers related to decision support systems. Summarize the article with points: Problem to be solved, alternatives, criteria, solutions

ANSWER

1. Difference Between DSS, AI, Expert System

| DSS | AI | Expert System |
|---|---|--------------------------------------|
| Facilitate Making Decision | Use Method based on intelligent behavior of humans to solve problem | Automating Decision When making |
| Decision Unstructured | Decision Structured | Decision Structured |
| Gain Knowledge From Computer System | Gain Knowledge from human behavior | Inject Knowloadge to Computer System |
| Limited Capacity | Limited Capacity | Full Capacity |
| Data Manipulation numeric | | Data Manipulation Symbolic |
| Characteristic Problem is complex and broad | Characteristic Problem is complex | Limited and Specialised |

<https://www.geeksforgeeks.org/difference-between-ai-and-expert-system/?ref=rp>

<https://www.geeksforgeeks.org/difference-between-dss-and-expert-system/>

Example Expert System

- **MYCIN:** It was based on backward chaining and could identify various bacteria that could cause acute infections. It could also recommend drugs based on the patient's weight. It is one of the best Expert System Example.
- **DENDRAL:** Expert system used for chemical analysis to predict molecular structure.
- **PXDES:** An Example of Expert System used to predict the degree and type of lung cancer
- **CaDet:** One of the best Expert System Example that can identify cancer at early stages

Example DDS System

- GPS Route Planning
- Employee shifts

Example AI

- Users search frequently

2. Difference Between Qualitative and Quantitative Form

| Qualitative | Quantitative |
|--|--|
| Focus on testing theory and hypothesis | Focus on exploring idea |
| Analyzed by math, statistical analysis | Analyzed by summarizing , categorizing |
| Expressed in Number , graphs , tables | Expressed in words |

<https://www.scribbr.com/methodology/qualitative-quantitative-research>

3. Why Need Vaccine

Why We Need Vaccine

Problem Solved : The COVID-19 situation in the world has paralyzed health facilitation, the vaccine itself works to provide antibodies to the body so that it can fight the virus

Alternative : By giving vaccines can provide natural antibodies to the body so that hospitals do not collapse

Criteria : the criteria that must be vaccinated are at least > 5 years and the main priority is the elderly

Solutions : give antibodies to the body while waiting for the covid drug to be available