ASSIGNMENT ON EXPERT SYSTEM AND MECHINE LEARNING

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BY

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Supervised

by

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1. COGNITIVE SCIENCE APPLICATIONS:

A. EXPERT SYSTEM:

An expert system is a computer program that mimics the decision-making abilities of a human expert in a particular domain. It uses a knowledge base and inference engine to solve complex problems.

Applications:

- Medical diagnosis systems
- Financial advisory systems
- Quality control systems
- Weather forecasting systems
- Legal research systems

2. - ROBOTICS FOR NAVIGATION

A. GENETIC ALGORITHM:

Genetic algorithms are a type of optimization technique inspired by the process of natural selection. They use evolution principles to search for optimal solutions.

Applications:

- Scheduling systems for manufacturing
- Resource allocation systems
- Portfolio optimization in finance
- Design optimization in engineering
- Traveling salesman problem

2B. ROBOTIC APPLICATIONS:

A. VISUAL PERCEPTION:

Visual perception enables robots to interpret and understand visual data from sensors and cameras.

Applications:

- Object recognition in warehouses
- Facial recognition in security systems
- Autonomous vehicles detecting pedestrians
- Medical imaging analysis
- Quality control in manufacturing

3. NEURAL INTERFACE APPLICATIONS:

1. NEURAL LANGUAGE:

Neural language enables machines to understand and interpret human language.

Applications:

- Virtual assistants like Siri and Alexa
- Language translation software
- Speech-to-text systems
- Sentiment analysis and opinion mining
- Chatbots for customer service