LAB SHEET - 1

Aim- Introduction to AI and its applications.

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➢ **AI(Artificial intelligence):**
- AI refers to the field of computer science.
- It dedicates creating the system capable of performing tasks that typically requires human intelligence.
- AI is the backbone of innovation in modern computing.
- AI involves creating machines or systems that can mimic human cognitive functions like learning, reasoning, and problem-solving.
- AI is used in various fields such as healthcare, finance, autonomous vehicles, customer service (chatbots), and entertainment.

➢ **Applications of AI:**

1. **Healthcare :-** AI helps in diagnosing diseases and analyzing medical images.It also helps doctors to deliver more accurate diagnoses and treatment plans.

2. **Finance :-** AI is used for fraud detection,trading and customer service through chatbots.AI also helps us in predictions and forecasting,real-time calculations etc.

3. **Transportation :-** AI supports automatic vehicles ,traffic management systems etc.AI also used to detect and react to hazards faster than a driver .

4. **Education :-** AI allows teachers to design and assign tasks,give feedback and effectively control classroom interactions.

5. **Agriculture :-** Make weather predictions,monitor agricultural sustainability, other than that robots can effortlessly carry out a variety of activities in farming fields are being developed based on AI.

6. **Entertainment :-** AI drives content recommendations on streaming services (e.g., Netflix),generates music and art, and creates advanced gaming experiences.

7. **Smart House :-** AI is used in home automation systems for controlling lighting,heating,security and other household functions through voice command or sensors.

8. **Art and Creativity:-** AI is involved in creating music, visual art, and even writing, helping artists and creators in generating novel content.

9. **Marketing:-** AI helps in targeting ads more effectively, analyzing consumer behavior, and creating personalized marketing campaigns.

10. **Cybersecurity:-** AI is used to detect and respond to cyber threats in real-time, analyzing patterns to prevent data breaches.