**AI(Artificial Intelligence)-(MCA205)**

**MODULE - 1**

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| * Introduction - * Overview of **AI applications** * Introduction to representation and search. * The **Propositional calculus**, * **Predicate Calculus**, * Using **Inference Rules** to produce Predicate Calculus expressions, * Application – A Logic based **financial advisor**. |

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| * **Artificial Intelligence** is defined as the process where a machine tries to make decisions like a human. * Ability to see,hear,interpret, and translate spoken and written language ,analyze data,generate suggestions and more. * Artificial Intelligence is a branch of computer science that was introduced with the idea to make things simpler and automotive which humans can’t (in most cases) |

1. **AI applications**
   1. **AI in E-Commerce.**

* AI helps to make appropriate suggestions and recommendations as per the user search history and view preferences.
* AI chatbots : that are used to provide customer support instantly and help to reduce complaints and queries to a great extent.
  + 1. Personalized Shopping

Used to create recommendation engines through which you can engage better with your customers. These recommendations are made in accordance with their browsing history, preference, and interests.

* + 1. Fraud Prevention.

By considering the usage patterns, AI can help reduce the possibility of credit card fraud taking place. Many customers prefer to buy a product or service based on customer reviews. AI can help identify and handle fake reviews .

* + 1. AI-Powered Assistants

Chatbots help improve the user experience while shopping online. Natural Language Processing is used to make the conversation sound as human and personal as possible.

* 1. **AI in Education purpose**
     1. Administrative Tasks Automated to Aid Educators

AI can help educators with non-educational tasks like task-related duties like facilitating and automating personalized messages to students, grading paperwork, arranging and facilitating parent interactions.

* + 1. Creating Smart Content

AI helps create a rich learning experience by generating and providing audio and video summaries and integral lesson plans.

* + 1. Voice Assistants

Without even the direct involvement of the lecturer or the teacher, a student can access extra learning material or assistance through Voice Assistants.

* + 1. Personalized Learning

hyper-personalization techniques can be used to monitor students’ data thoroughly, and habits, lesson plans, reminders, study guides, flash notes, frequency or revision, etc., can be easily generated.

* 1. **AI in Robotics**

The robots are only designed to deliver the task but Artificial Intelligence makes them able to analyze the vacant space and make the best decision in real-time.

* + 1. NLP
    2. Object recognition and Manipulation
    3. HRI(Human-Robotics Interaction) : helps in understanding human patterns such as gestures, expressions, etc.

It can be used for:[Carrying goods in hospitals, factories, and warehouses],[Cleaning offices and large equipment]

[Inventory management]

* 1. **AI in Healthcare:**
* AI is used to build sophisticated machines that can detect diseases and identify cancer cells.
* Can help analyze chronic conditions with lab and other medical data to ensure early diagnosis.
* AI uses the combination of historical data and medical intelligence for the discovery of new drugs.
  1. **AI in Navigation**

AI is heavily used by Uber and many logistics companies to improve operational efficiency, analyze road traffic, and optimize routes.

* 1. **AI in HR**

Companies use intelligent software to ease the hiring process.

AI helps with blind hiring.

AI drive systems can scan candidate’s job profiles, and resumes to provide recruiters an understanding of the talent pool they must choose from.

* 1. **AI in Agriculture**
* Used to identify defects and nutrient deficiencies in the soil.
* AI bots can help to harvest crops at a higher volume and faster pace than human laborers.
  1. **AI in Social Media**
     1. Instagram

AI considers your likes and the accounts you follow to determine what posts you are shown on your explore tab.

* + 1. Facebook

DeepText tool -with this, Facebook can understand conversations better. It can be used to translate posts from different languages automatically.

* + 1. Twitter

AI is used by Twitter for fraud detection, for removing propaganda, and hateful content.

* 1. **AI in Travel and Transport**
     1. Heavy goods transportation
     2. Traffic management
     3. Ride Sharing
     4. Route Planning
  2. **AI in Finance**
* AI detects changes in transaction patterns and other potential red flags that can signify fraud, which humans can easily miss, and thus saving businesses and individuals from significant loss.
* Aside from fraud detection and task automation, AI can also better predict and assess loan risks.

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