TASK - #02

Made by -

THE CREATORS

COMPLEX PROBLEM TABLE

Complex Problem Table :

Serial Number	Application Domain	Complex Problem Identified	Justification
1	Healthcare	Predicting Disease Outbreaks	Using machine learning to analyze health data to predict disease outbreaks (Smith et al., 2020).
2	Environmental Science	Climate Change Modeling	Simulating future climate scenarios with computational models (Jones & Brown, 2019).
3	Cybersecurity	Detecting Advanced Persistent Threats (APTs)	Employing AI to identify and mitigate APTs in network security (Lee et al., 2021).

1.Precision Medicine in Oncology :

Application: Using AI and machine learning to personalize cancer treatment based on genetic profiles.

Literature: "Advances in AI for cancer treatment" (Garcia et al., 2021)

Justification: By analyzing large genomic datasets, AI can identify patterns that predict how different patients will respond to various treatments, thereby improving outcomes and reducing side effects.

2.Renewable Energy Optimization :

Application: Developing algorithms to optimize the integration of renewable energy sources into the power grid.

Literature: "Optimizing renewable energy systems" (Chen & Wang, 2020)

Justification: Efficiently integrating renewable energy into the grid requires solving complex optimization problems to balance supply and demand, reduce costs, and ensure stability.

3.Natural Language Processing (NLP) for Legal Document Analysis :

Application: Implementing NLP techniques to automatically analyze and summarize legal documents.

Literature: "AI in Legal Tech" (Davis & Morgan, 2022)

Justification: The legal field generates vast amounts of text, and AI can assist in rapidly analyzing contracts, statutes, and case law to extract relevant information and provide insights, significantly improving efficiency and accuracy.

THANK

YOU!