My Learning Journey in Artificial Intelligence

Hello everyone! I am Tasfia Mostofa Shatu, and this short video is about my learning journey in the Artificial Intelligence course.

Midterm Exploration: Fundamentals of AI

What is AI

Exploring the core definition and essence of Artificial Intelligence.

Different approaches to AI

Understanding various methodologies and philosophies behind AI development.

The state of the art and what AI can do today

Grasping the current capabilities and cutting-edge applications of AI.

Intelligent Agents, their goals, and different types of agents

Delving into the concept of intelligent agents, their objectives, and classifications.

Types of AI and types of environments

Categorizing AI based on its functionalities and the environments it operates within.

Deep Dive into Search Algorithms

1

State Space Search methods

Techniques for navigating through possible states to find a solution.

2

Uninformed and Informed Search strategies

Distinguishing between search methods that use or don't use problem-specific knowledge.

3

Well-defined Problems

Such as the Eight Puzzle and Eight Queens problems.

4

Search algorithms

Like Breadth-First Search (BFS), Depth-First Search (DFS), and the N-Queen problem.

5

Heuristic Search, Bidirectional Search, Best First Search, A-Star Search and Admissibility

Advanced search techniques for efficient problem-solving.

6

Other important strategies

Like Beam Search, Hill Climbing, AO-Star Algorithm, Min-Max Algorithm, Alpha-Beta Pruning, and Iterative Deepening Search.

Final Exam: Advanced AI Concepts

Constraint Satisfaction Problems

Understanding how to solve problems by satisfying a set of constraints.

Adversarial Search

Learning about search techniques used in competitive environments, like games.

Knowledge Representation

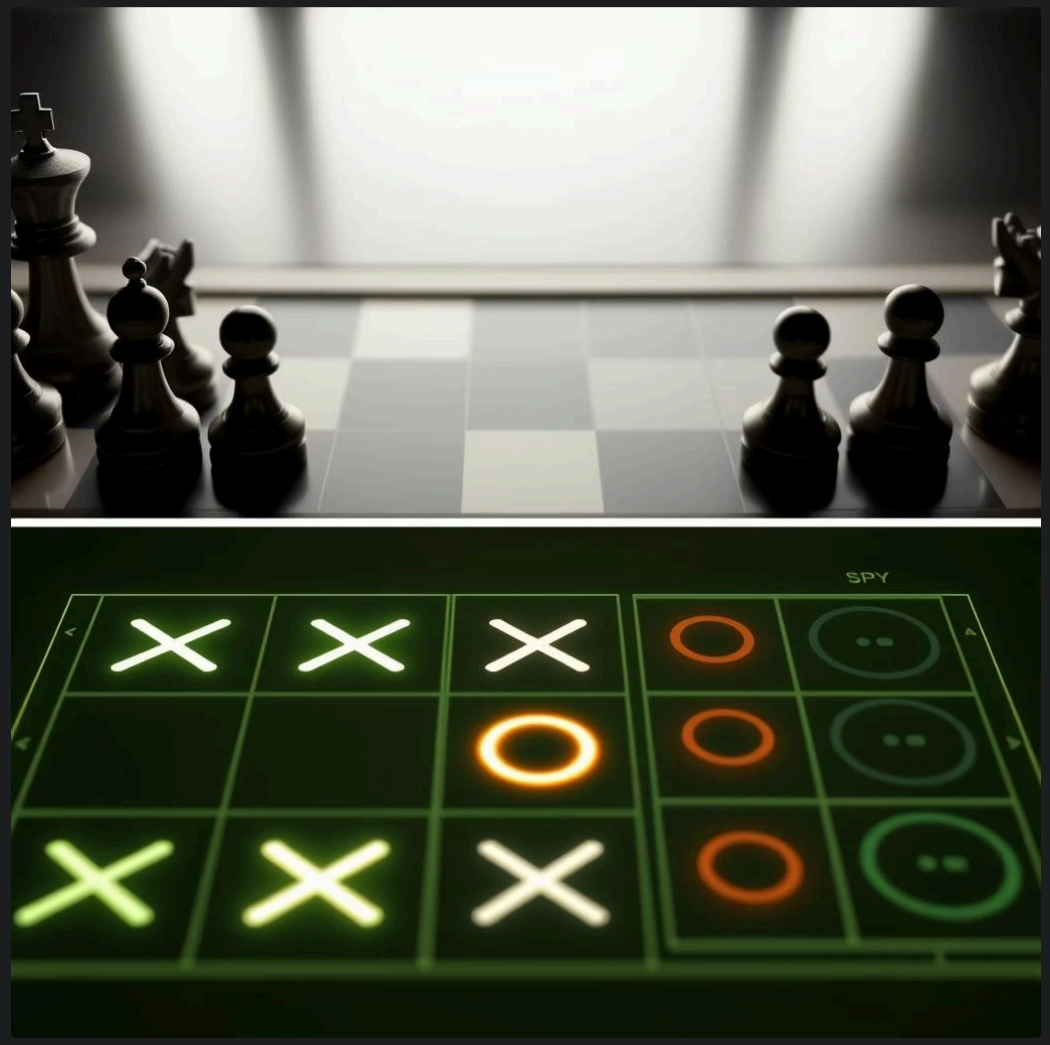
Exploring methods for representing information in a way that AI systems can use.

Practical AI-Based Games Implementation

Alongside theory, I also worked on practical AI-based games. I successfully implemented three games using AI algorithms:

- **Chess** — where I applied adversarial search techniques.
- **Tic Tac Toe** — using the Min-Max algorithm with Alpha-Beta Pruning for smart decision making.
- **Spy Chaser** — where AI logic helps the player make intelligent moves.

Through these topics and projects, I have built a strong foundation in Artificial Intelligence, combining both theory and hands-on practice.



Gratitude and Conclusion

> ✨ I would also like to express my sincere gratitude to our respected teacher, Razorshi Prozzwal Talukder Sir, for guiding us, inspiring us, and giving us the opportunity to learn AI in such an interesting and practical way. ✨

Thank you Sir! Thank you for watching!