

# Foundation of Artificial Intelligence

Dr. Mohamed Mostafa

AI 511 Course Introduction & Plan

## Lecture 0



## 01

## About the Instructor

**Short Bio:**

Dr. Mohamed Mostafa received his M.Sc. and PhD in Computer Science from Helwan University in the Arab Republic of Egypt's Faculty of Computers and Information. He also did a post-doctoral scientific mission in the Europe Union in an IT4Innovation Project. He is currently employed as an Associate Professor. Palo Alto International has qualified Dr. Mohamed as a Cyber Security Trainer. He is also a certified artificial intelligence trainer from the French College of Engineering and Applications, as part of the Egyptian Ministry of Communications' drive to localize artificial intelligence technology. His research interests include; AI algorithms optimization, AI applications in different domains, WBNs, and Wireless Sensor Networks security.



## Sources

Lectures are based on their counterparts in the following courses:

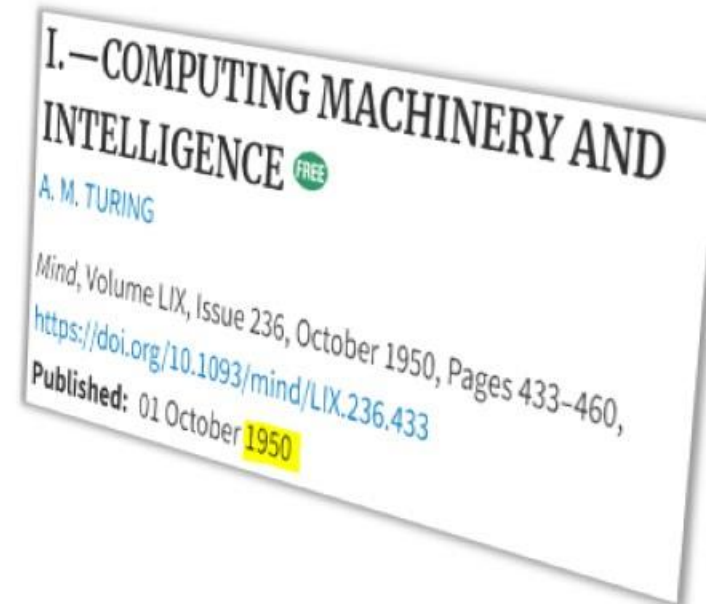
- **Introduction to Artificial Intelligence Course, Dr. Amr S. Ghoneim**
- *Intelligent Systems*, **University of British Columbia** (Dept. of Computer Science)
- *Introduction to Artificial Intelligence*, **University of Wisconsin-Madison**
- *Artificial Intelligence*, **University of Illinois at Urbana-Champaign**
- *Artificial Intelligence*, **University of California, Berkeley**

### Definition of Artificial Intelligence (AI) :

AI is a branch of computer science that aims to create machines capable of intelligent behavior, mimicking human cognitive functions.

Birth of AI: 1950-1956

1950: Alan Turing : 'Can machines think?'



Source: [Tableau](#)

### Definition of Artificial Intelligence (AI) :

AI is a branch of computer science that aims to create machines capable of intelligent behavior, mimicking human cognitive functions.

Birth of AI: 1950-1956

**1952: Arthur Samuel** developed a program to play checkers, which is the first to ever learn the game independently.



Source: [Tableau](#)

### Definition of Artificial Intelligence (AI) :

AI is a branch of computer science that aims to create machines capable of intelligent behavior, mimicking human cognitive functions.

Birth of AI: 1950-1956

**1955: John McCarthy** held a workshop at Dartmouth on “artificial intelligence”.

AI boom: 1980-1987

**1986:** Ernst Dickmann and his team created and demonstrated the first driverless car



Source: [Tableau](#)

## Types of Artificial Intelligence (AI) :



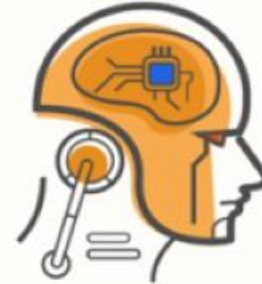
### Narrow AI

Dedicated to assist with or take over specific tasks.



### General AI

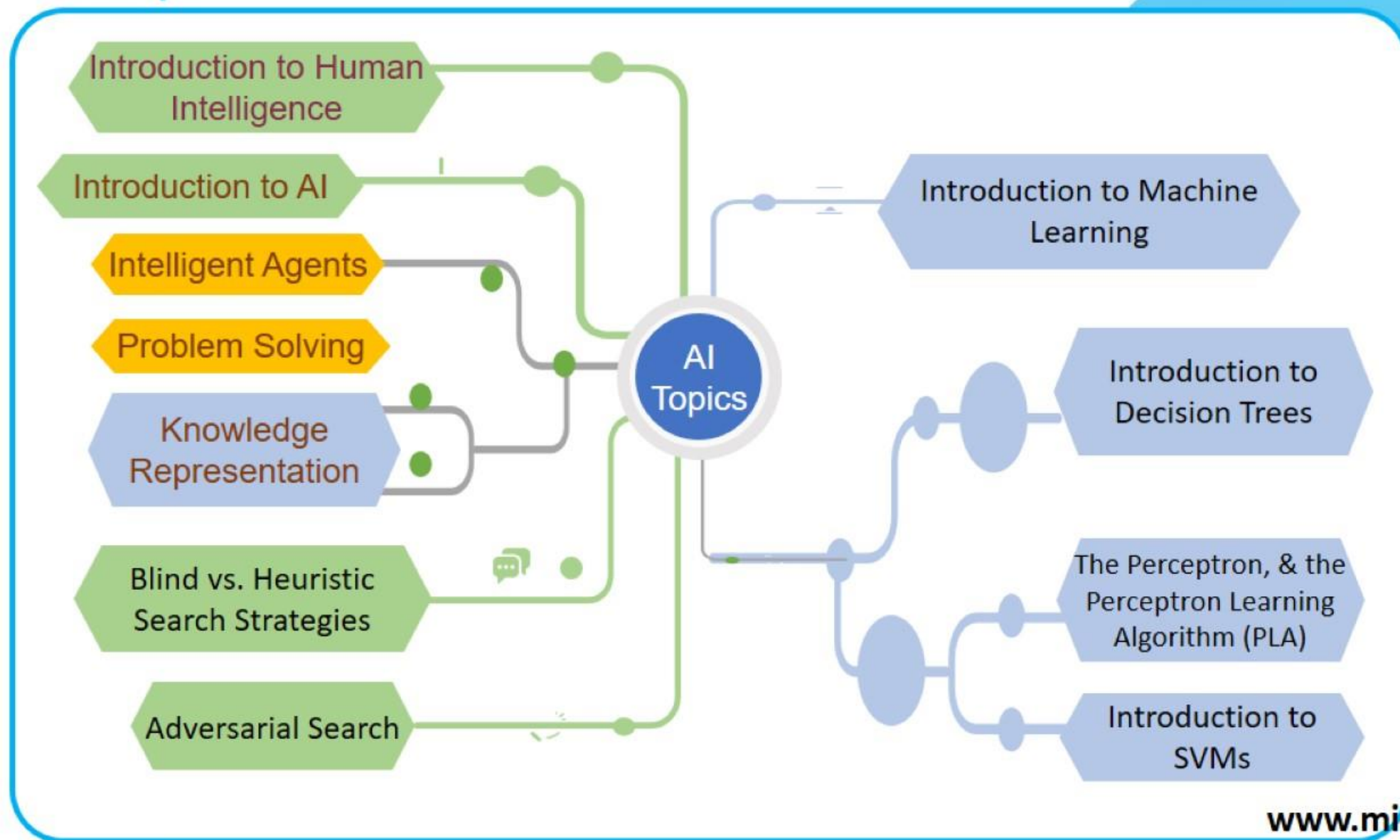
Takes knowledge from one domain, transfers to other domain.

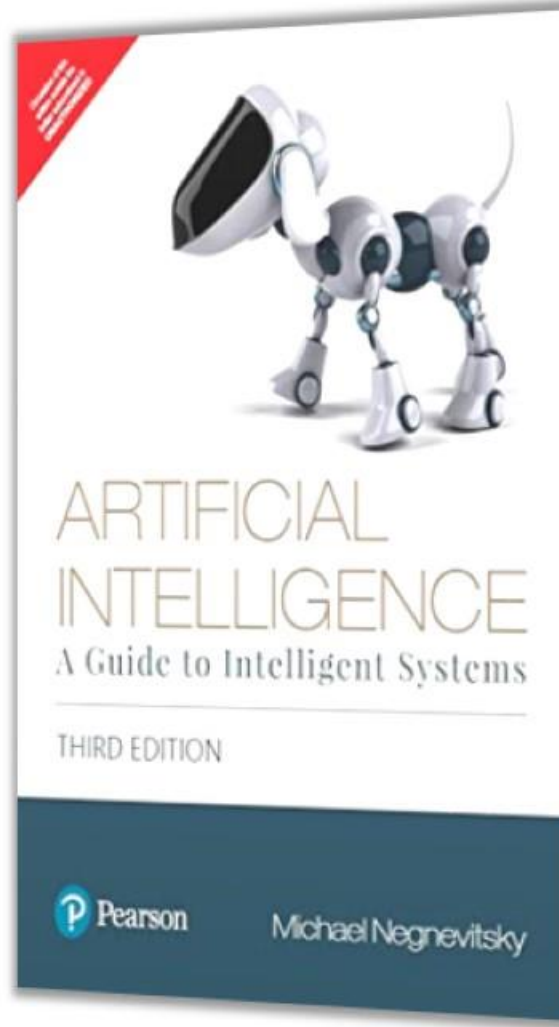
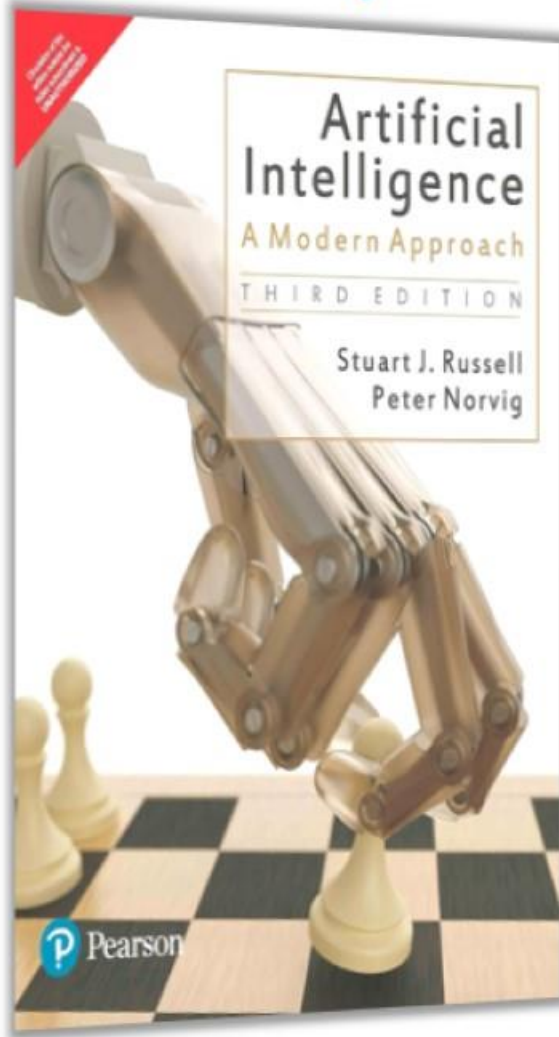


### Super AI

Machines that are an order of magnitude smarter than humans.

source: [AHT Tech](#)





## Indicative Reading List

□ Stuart J. Russell and Peter Norvig, "Artificial Intelligence: A Modern Approach," Third Edition (2015), by Pearson Education Inc.

□ Negnevitsky M. Artificial intelligence: a guide to intelligent systems. Pearson education; 2005.

## Grading

**80%** Short Exams

**20%** Final Exam



What does the  
future hold?





# Thank You