

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:

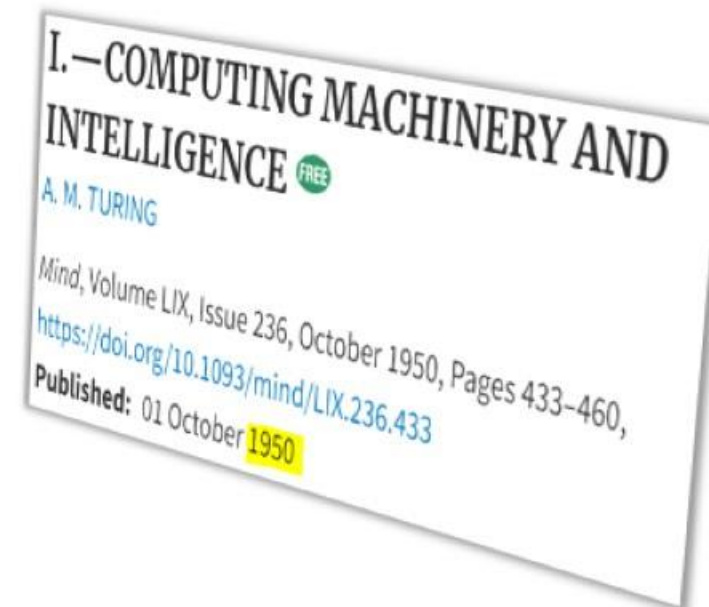
- **Introduction to Artificial Intelligence Course, Dr. Amr S. Ghoneim**
- *Intelligent Systems*, **University of British Columbia** (Dept. of Computer Science)
- *Introduction to Artificial Intelligence*, **University of Wisconsin-Madison**
- *Artificial Intelligence*, **University of Illinois at Urbana-Champaign**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



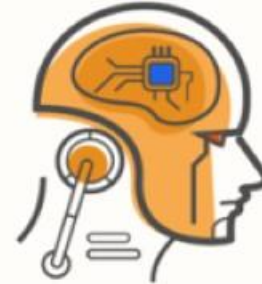
Narrow AI

Dedicated to assist with or take over specific tasks.



General AI

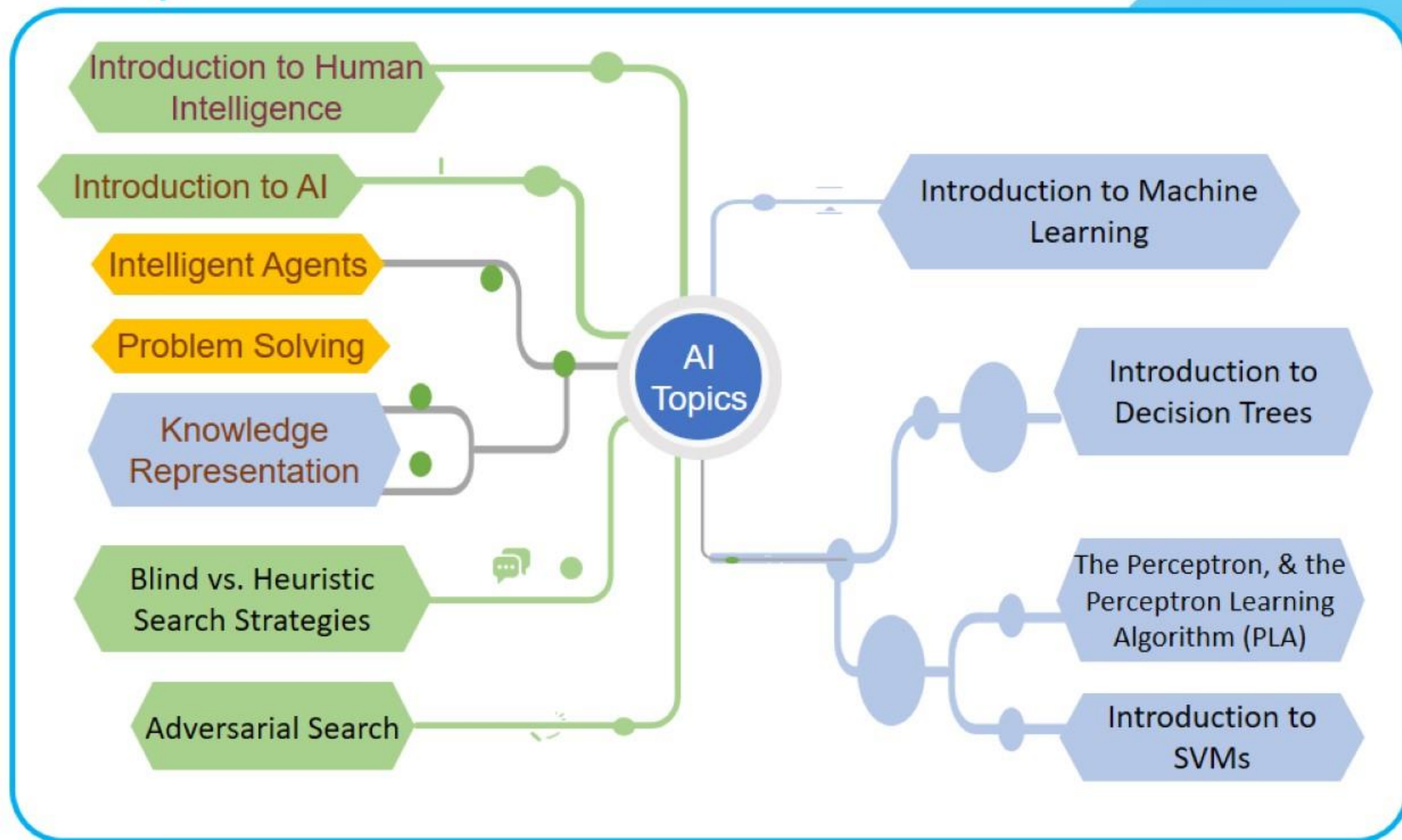
Takes knowledge from one domain, transfers to other domain.

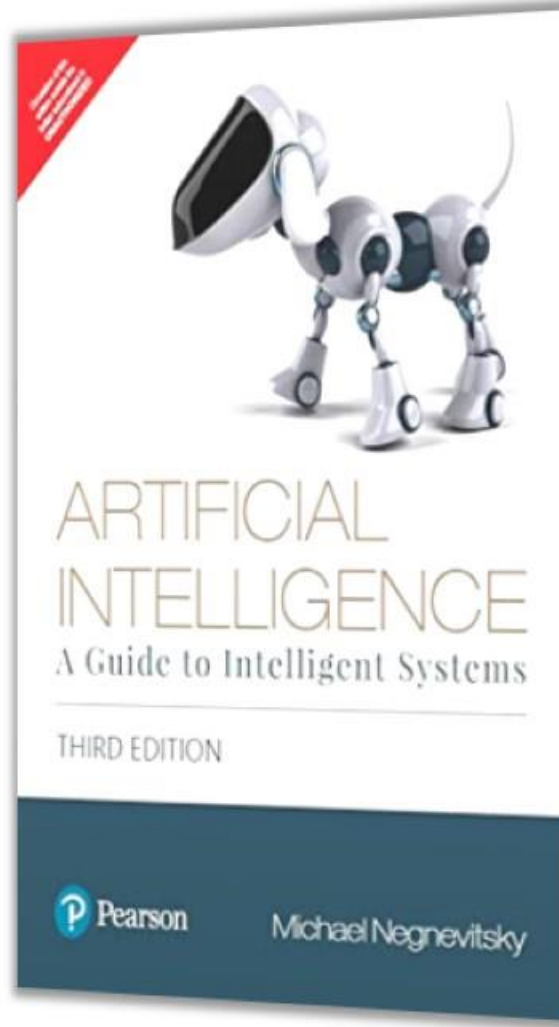
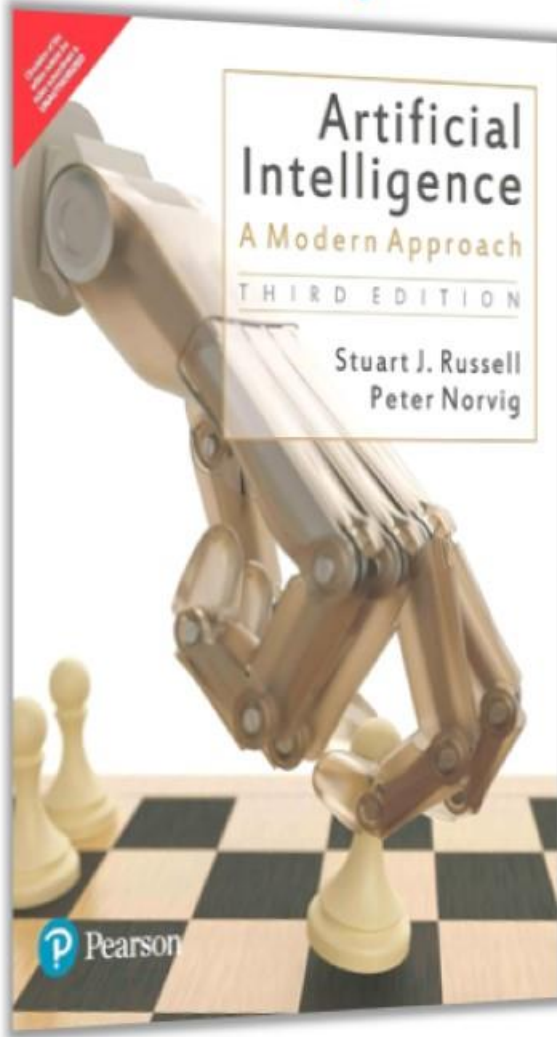


Super AI

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