

TECH THAT PEOPLE CALL “ARTIFICIAL INTELLIGENCE”

MACHINE LEARNING

Statistical (based on data)

AUTOMATED REASONING

Symbolic (based on rules)

Note: Machine learning is currently the most popular approach, but some believe that automated reasoning may make a comeback or that these two branches may be combined in new ways.

Deep Blue recommended chess moves by using the rules of the game and searching a parallelized tree of many possible combinations of moves.

The various ghosts in **Pac-Man** are programmed to chase you using different pathfinding methods. (Blinky, the red ghost, is most aggressive!)

EXPERT SYSTEMS

PLANNING

LABELED DATASETS

CLASSIFICATION

FaceID classifies images of faces using convolutional neural networks (CNNs).

MIXTURE OF LABELED & UNLABELED DATASETS

GENERATIVE

DALL-E produces images from text through an iterative process using a diffusion model.

ChatGPT generates text in response to typed prompts using a transformer deep learning model.

REINFORCEMENT

AlphaGo develops strategies for the game go using self-play reinforcement learning.

UNLABELED DATASETS

CLUSTERING

Spotify clusters songs into music genres using hierarchical density-based spatial clustering with noise (HDBSCAN).