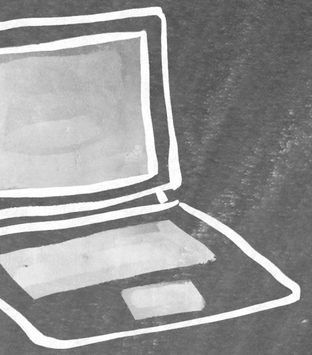
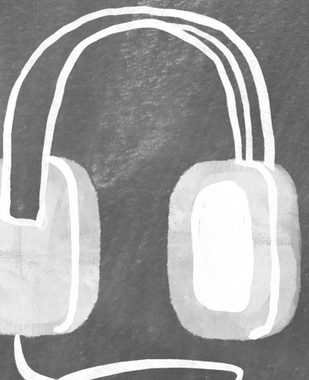
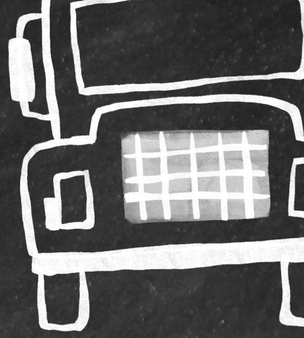
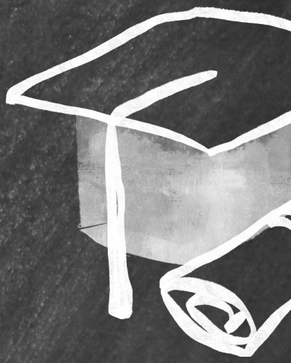
TRAINING

- ARTIFICIAL INTELLIGENCE
- MACHINE LEARNING
- DEEP LEARNING




DISCLAIMER

The information provided here is for general knowledge and informational purposes only. I am not a qualified expert in this area, and this content should not be construed as professional advice. Always consult with a qualified professional for specific guidance.

WHICH TRAFFIC SIGN IS THIS?

Hint: NTMK x CMT8

HOW DO YOU KNOW THAT?

There are some reasons:

- You go pass this sign everyday
- You were told to be careful by friends

WHICH NUMBER IS THIS?

HOW DO YOU KNOW THAT?

All 3 pictures got the same feature:

- 3 angles
- compare in pixel, it is pretty same at almost [x,y] points

QUESTION NO. 1

What animal is it?

East African antelope

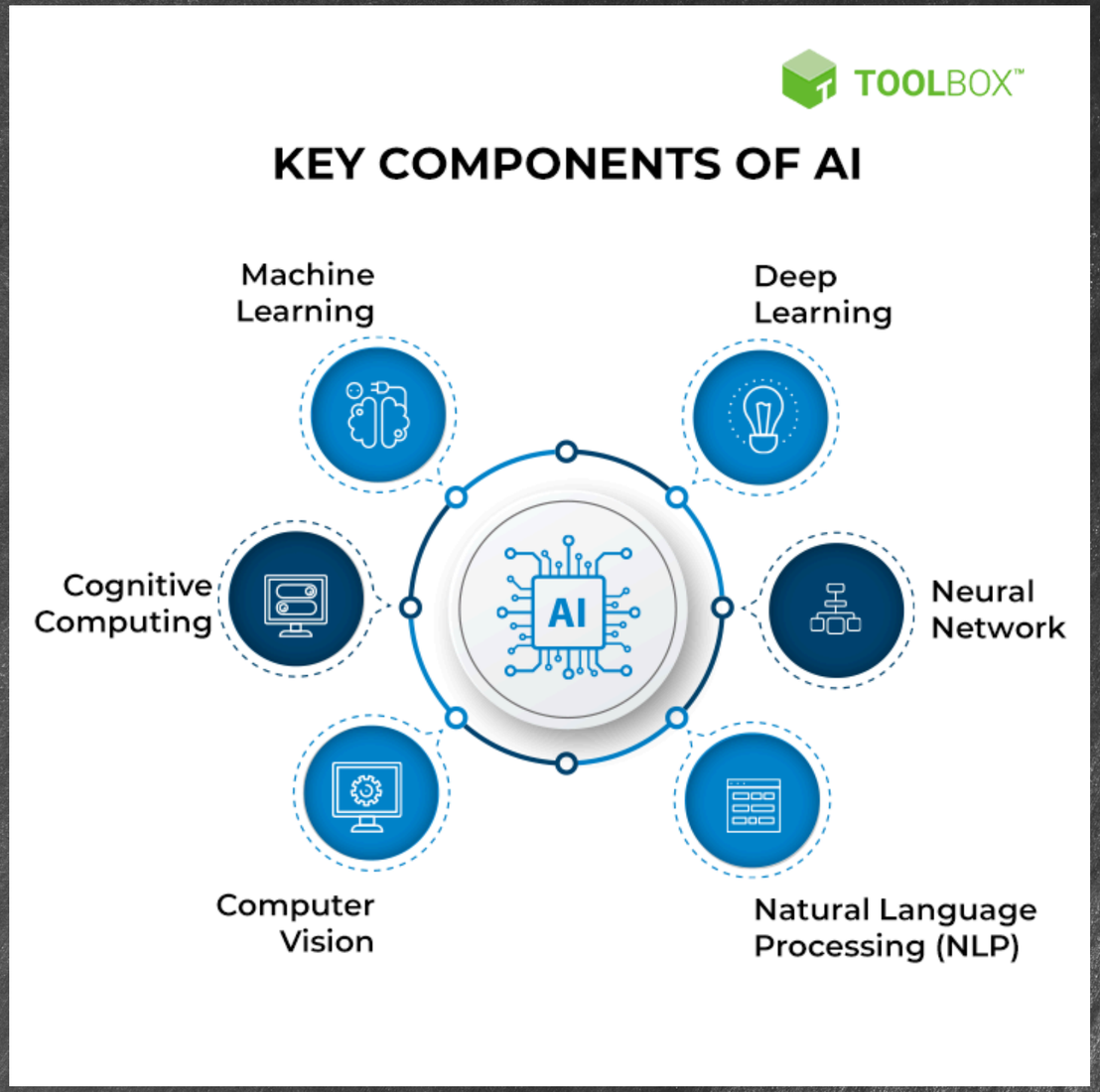
QUESTION NO. 2

What animal is it?

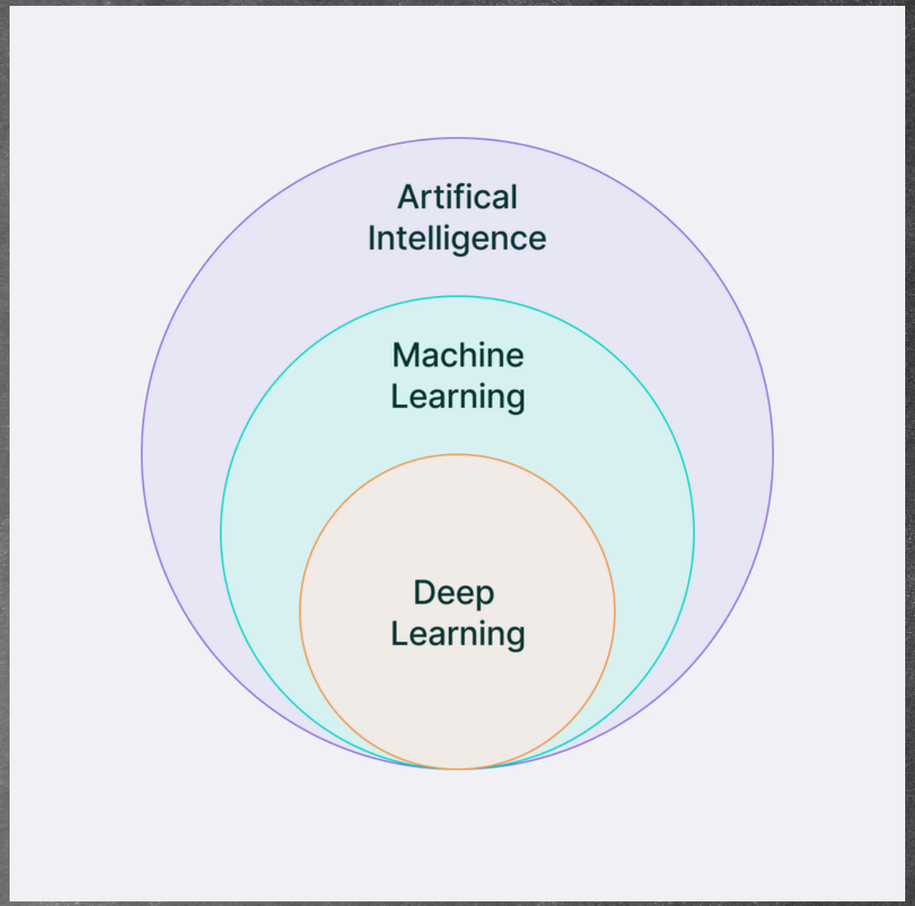
wildebeest


HOW DO YOU RECOGNIZE
THESE ANIMALS?
There are some reasons:
• You used to see information of these animals
• You learned about it
• You heard from someone
• Feature (bull horn)
It is
In your brain.

AI IS


TOOLBOX™
KEY COMPONENTS OF AI
Machine Learning
Deep Learning
Cognitive Computing
AI
Neural Network
Computer Vision
Natural Language Processing (NLP)

MACHINE LEARNING



Key aspects of machine learning:

- Learning from Data: ML algorithms learn from data rather than being explicitly programmed with rules.
- Pattern Recognition: These algorithms identify patterns and trends within data.
- Prediction and Decision-Making: Once trained, they can be used to make predictions or automate decisions.
- Improvement over time: As they process more data, their performance and accuracy improve.

Types of Machine Learning:

- Supervised Learning: Algorithms learn from labeled data, where the correct answer is provided.
- Unsupervised Learning: Algorithms discover hidden patterns and structures in unlabeled data.
- Reinforcement Learning: Algorithms learn through trial and error, receiving rewards or penalties for their actions.

Applications of Machine Learning:

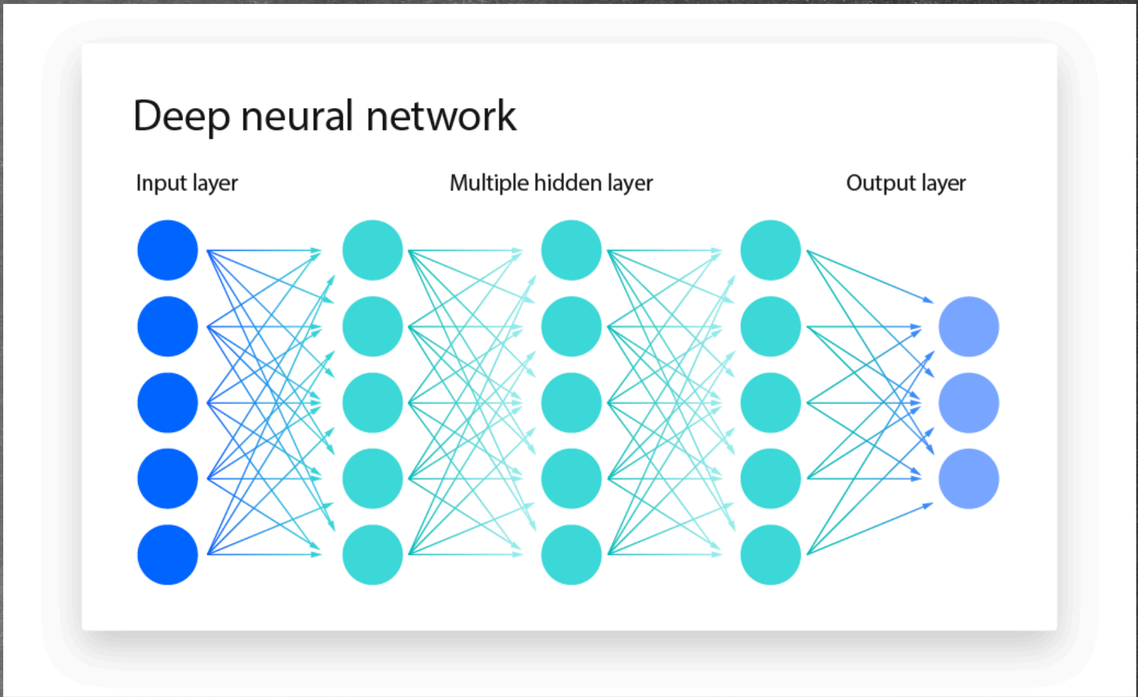
- Customer Service: Chatbots and virtual assistants.
- Data Analysis: Identifying patterns and insights in data.
- Image Recognition: Identifying objects and faces in images.
- Natural Language Processing: Understanding and generating human language.
- Predictive Analytics: Predicting future outcomes based on historical data.

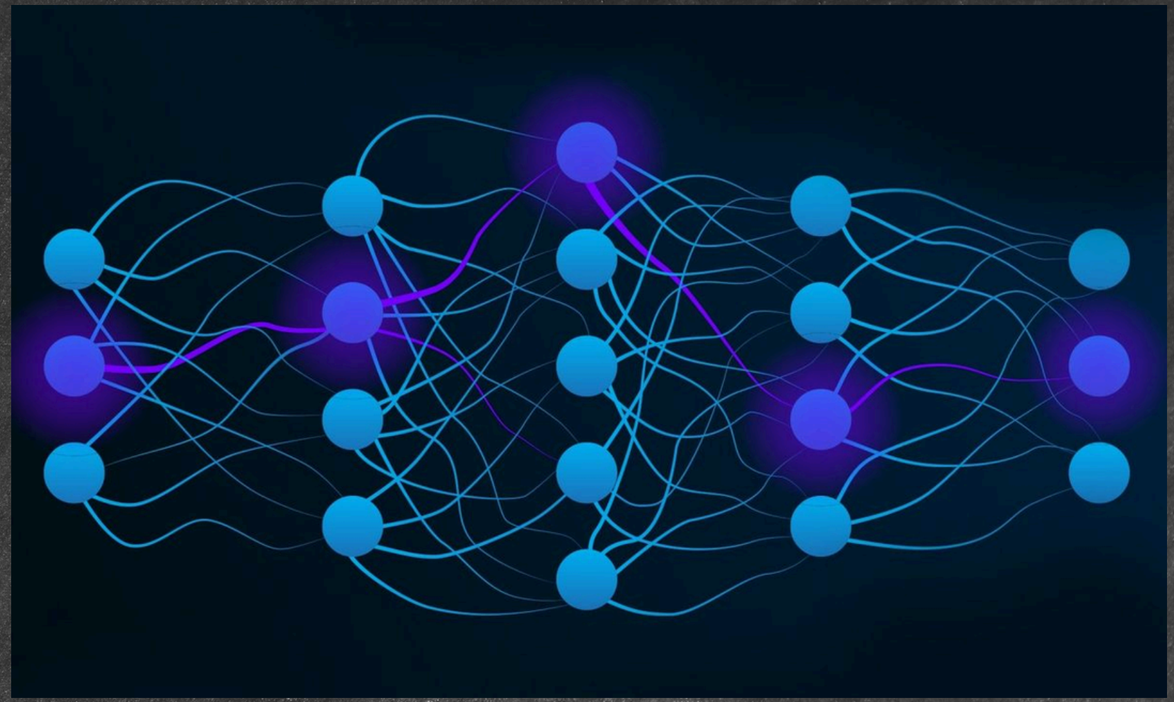
Akinator, the mind reading genie

Akinator can read your mind and tell you what character you are thinking of, as if by magic. Think of a real or fictional character, answer few...

akinator.com /

DEEP LEARNING



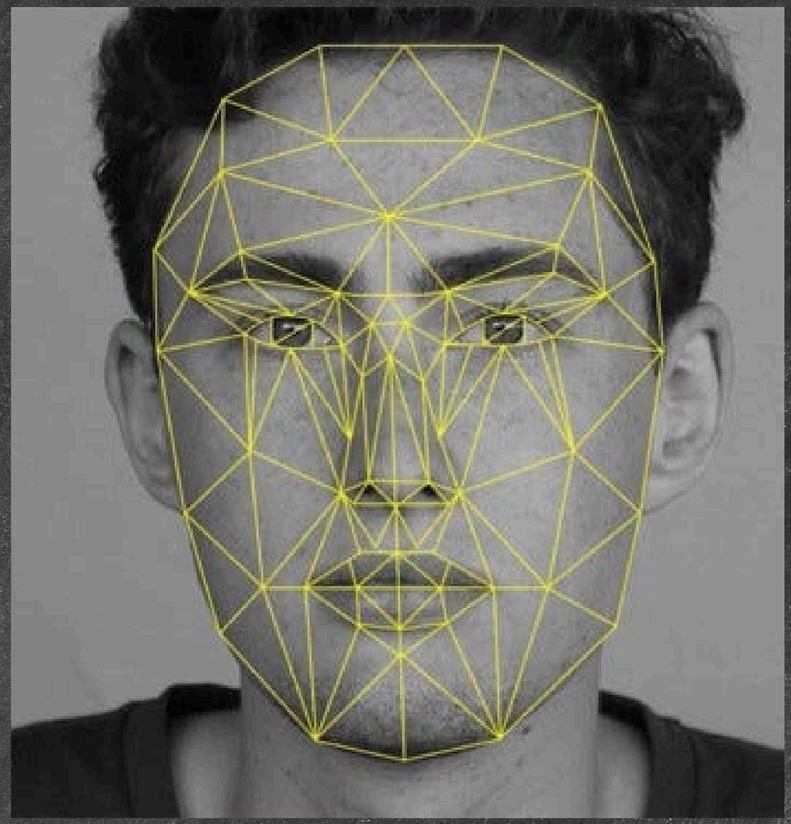


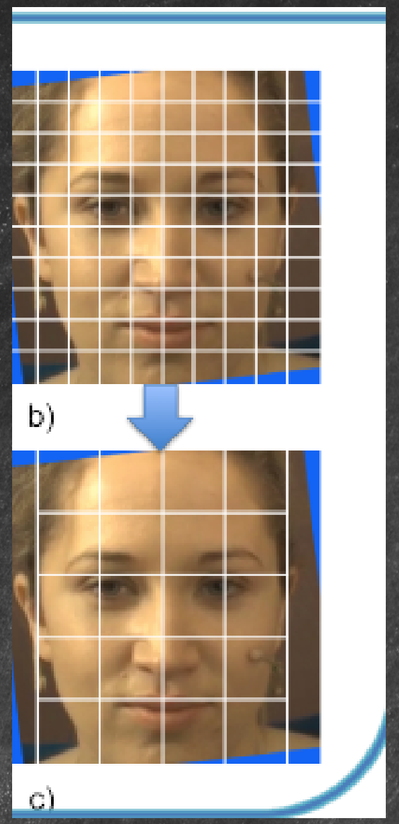
Deep neural network

Human neural network Simulation

GPU => Matrix processing => is good for neural network

FEATURE EXTRACTION





Which is the best for face regconition?

ACHIEVEMENT FOR THIS COURSE

VIDEO

MISSION

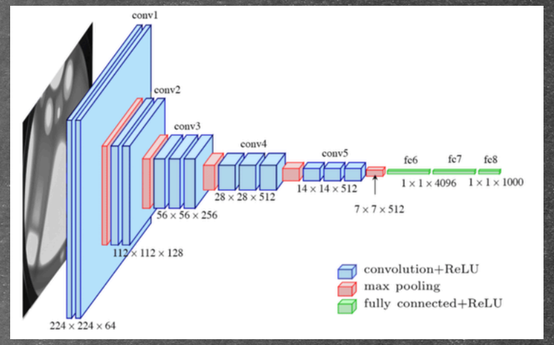
Develop practical machine learning models for autonomous driving tasks.

OBJECTIVES

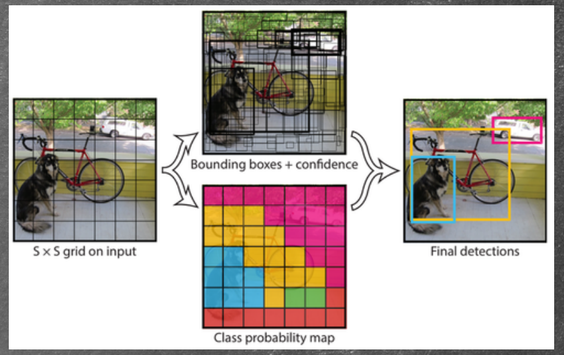
- Object Detection and Tracking
- Lane Detection and Keeping
- Traffic Sign Recognition
- Path Planning and Decision Making
- Simulated Environment Development

KNOWLEDGE

MODEL



CNN



YOLO

COMPUTER VISION

OpenCV

OTHER

Segment detection

Unity

SUMMARY

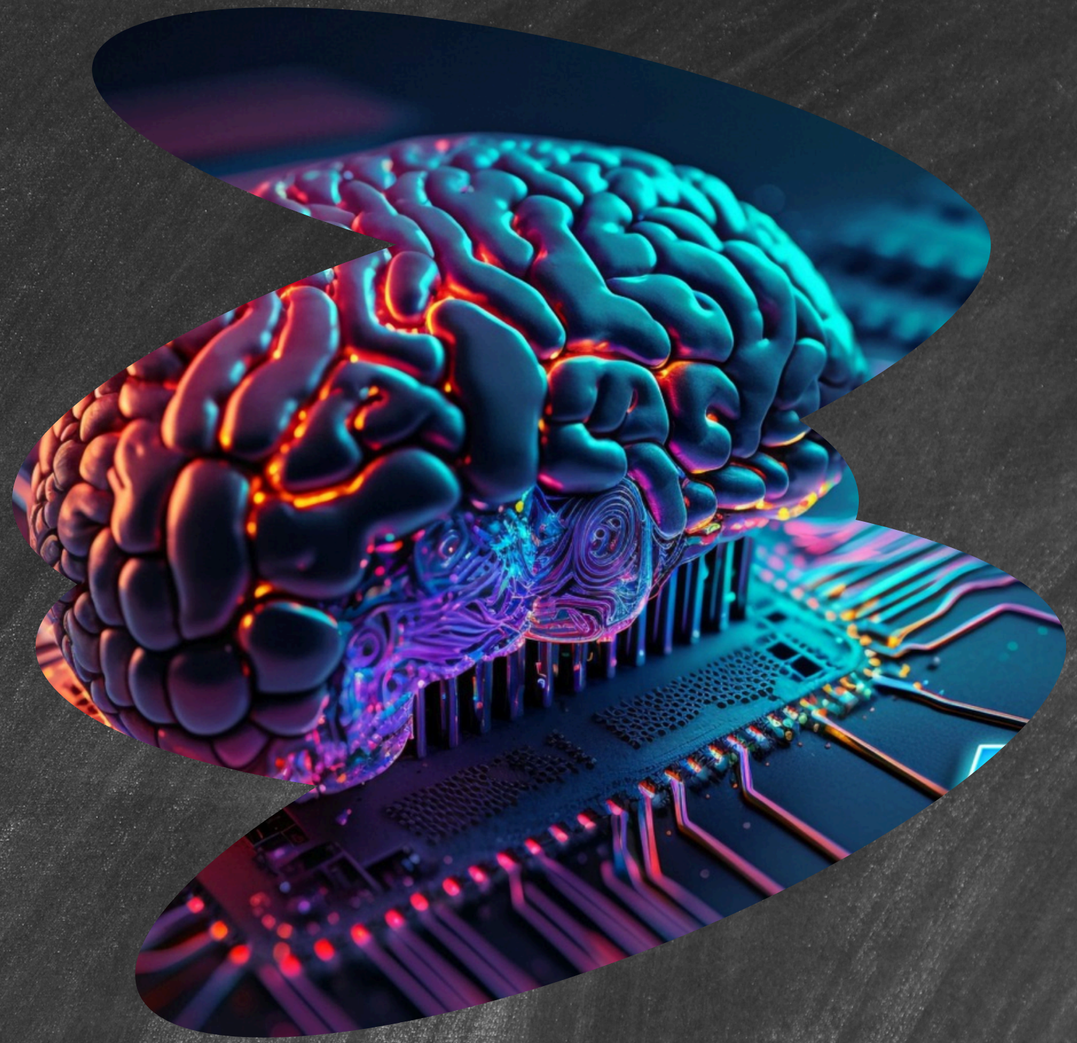
AI for Beginner

Machine Learning

Deep Learning

Feature extraction

QUESTION ???




THANK YOU
VERY MUCH!