

Welcome to AI CLUB 2023!

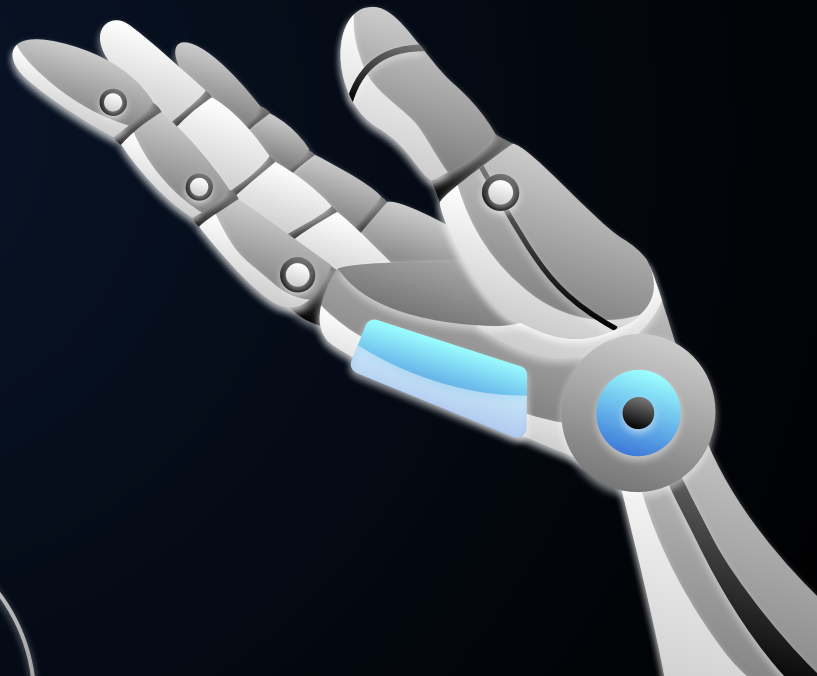
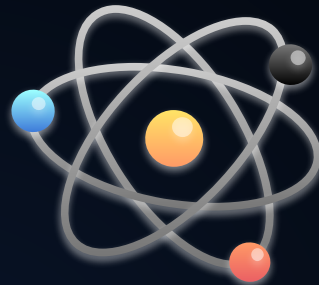


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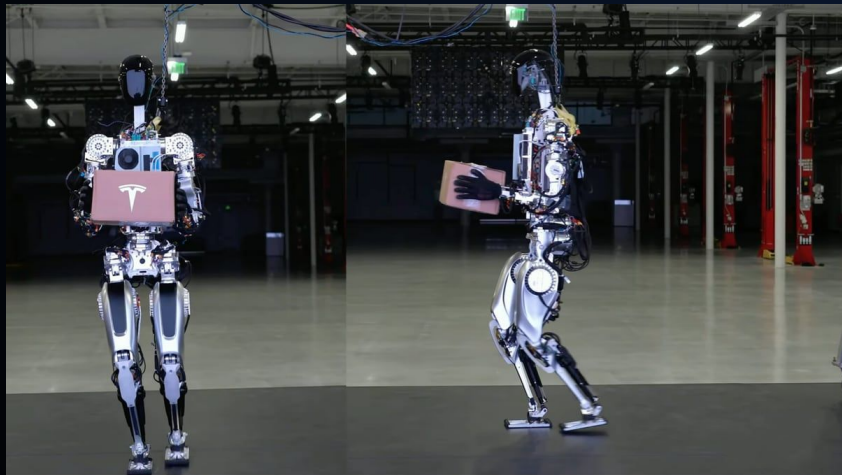
Overview of AI

04

Brain

What is AI Club?

AI Club aims to teach high schoolers how to **create their own artificial intelligence** by using **artificial neural networks** and **how these algorithms work** through a **"high-schooler friendly"** manner.



Meet the Senior Officers

Lukas
Cao

Aiden
Choe

Stephen
Hung

President/
Founder

Co-President

Vice President

Senior
Hobbies:
Programming, Math
Piano, Tennis

Senior
Hobbies: Playing
piano, reading

Senior
Hobbies:

- games
- robotics
- kpop
- web/mobile
app

Meet the Junior Officers

Neil
Jatakia

Secretary

Junior
Hobbies:

- Table tennis
- gym

Caden
Hong

Treasurer

Junior
Hobbies:

Procrastinating
Anything that isn't
art

Shaant
Puri

UCC Rep.

Junior
Hobbies:

- Music
- Gym
- Tennis
- Ping pong

Preston
Hu

Social Media
Manager

Junior
Hobbies:

I go gym and love to
hate school. Waiting
On the One Piece
Finale

Meet the TAs

Jeremy
Liang

Senior
Hobbies: origami,
cooking, baking,
and playing rpgs

Jordan
Fleming

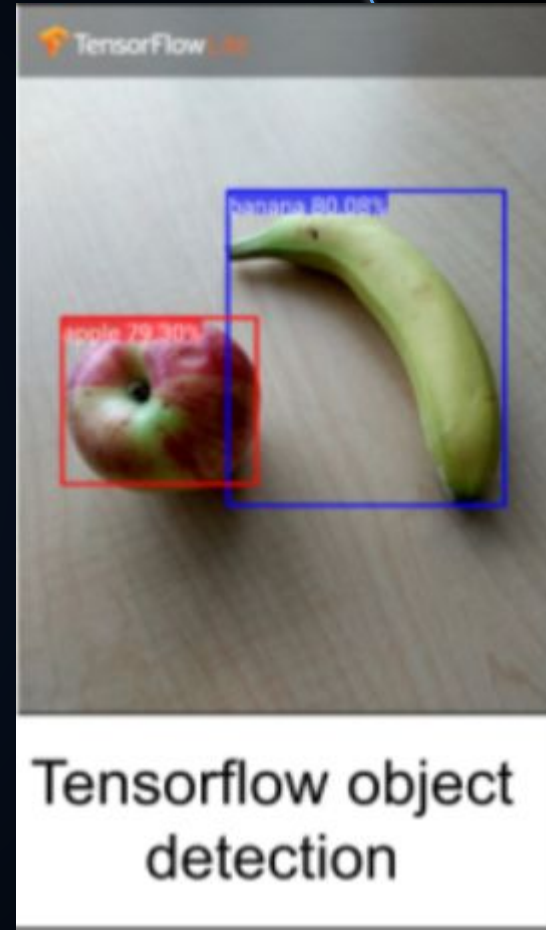
Senior
Hobbies:
Drawing,
skateboarding, and
reading

AI Overview: How is AI Used today?

Computer Vision



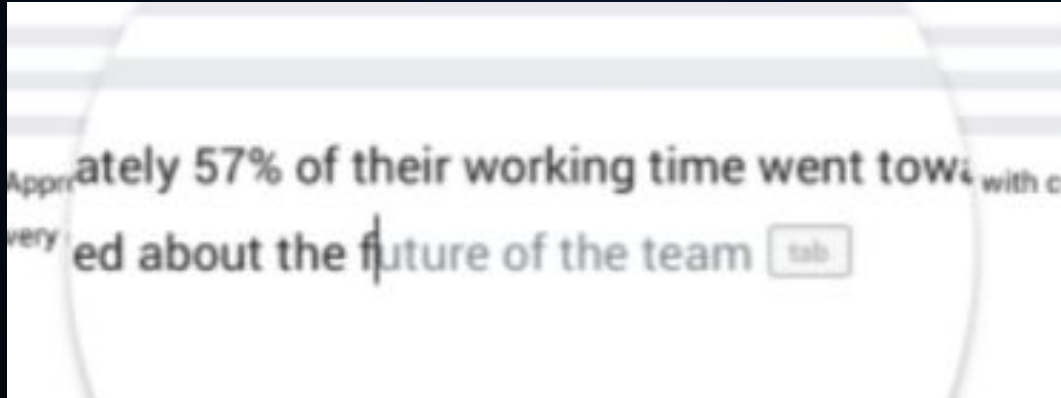
Neural Style Transfer



Recommender Systems:

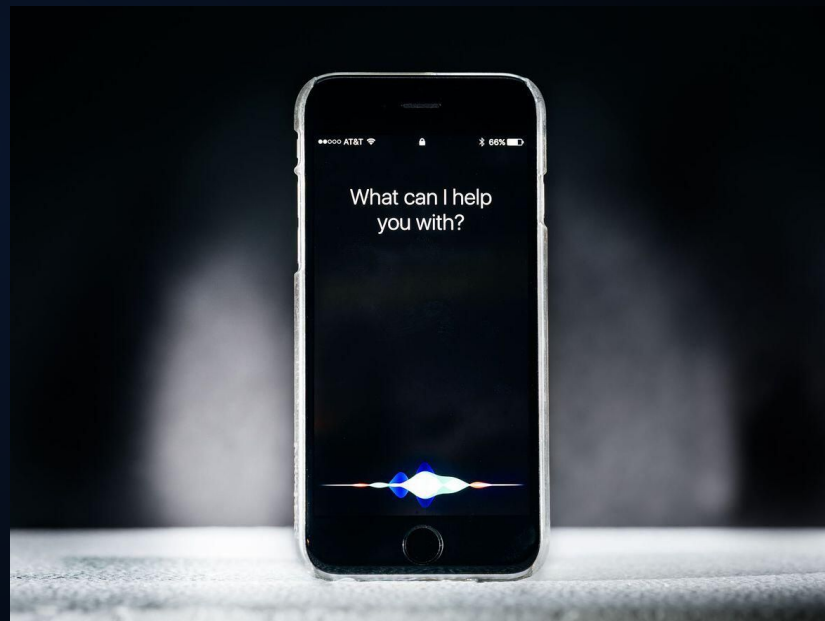
AI is heavily used when recommending things to people. Some of the many applications that utilize this recommender system include:

- Netflix
- Youtube
- Even the google docs autocomplete

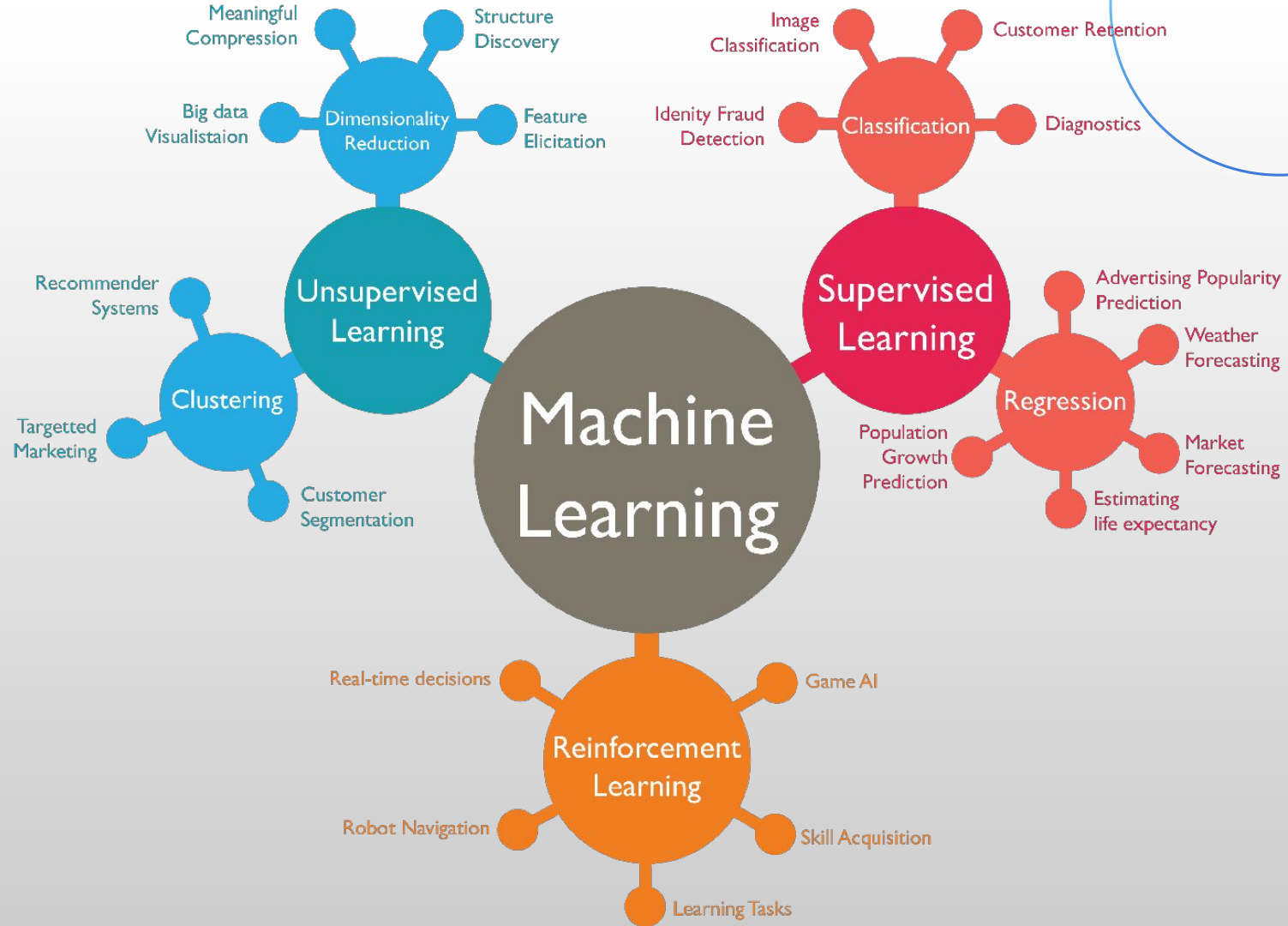


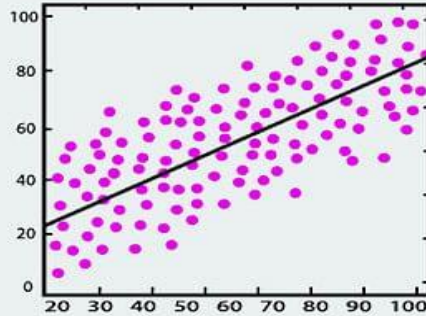
Audio

“Hey Siri”



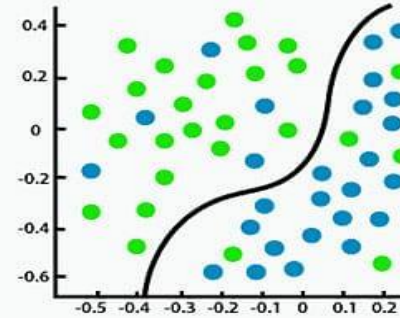
3 Types of Machine Learning





Regression

versus



Classification

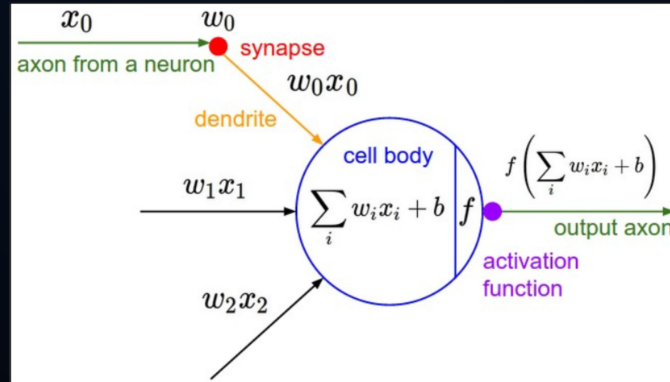
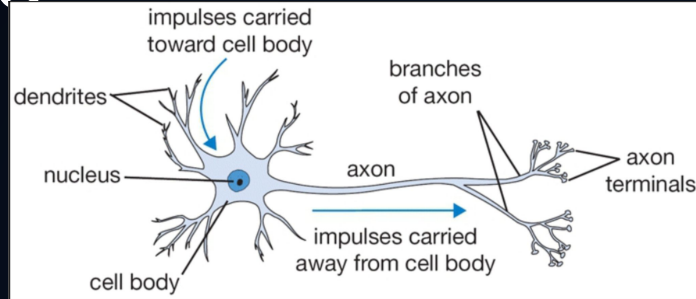
predict continuous value

- temperature
- house price

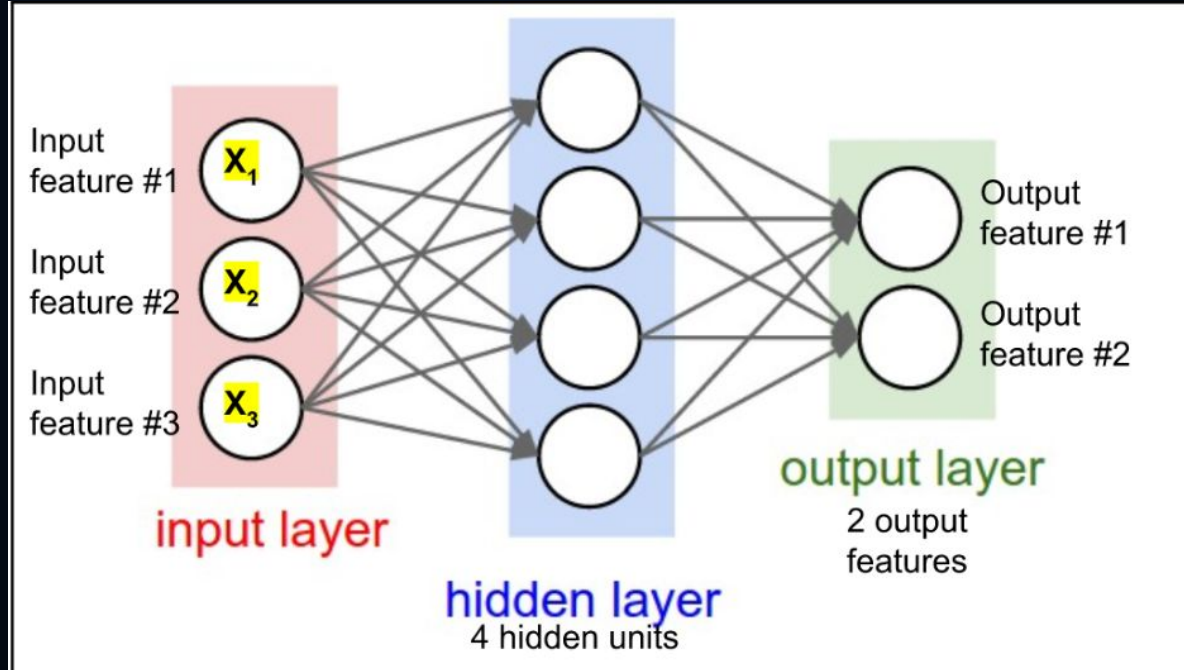
predict continuous value

- Binary Classification
(cancerous tumor)
- Multi-Class Classification
(handwritten digit)

The Biological & Artificial Neuron

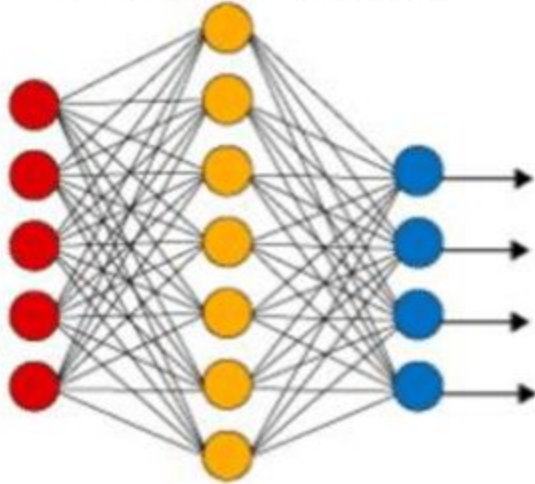


Shallow Artificial Neural Network

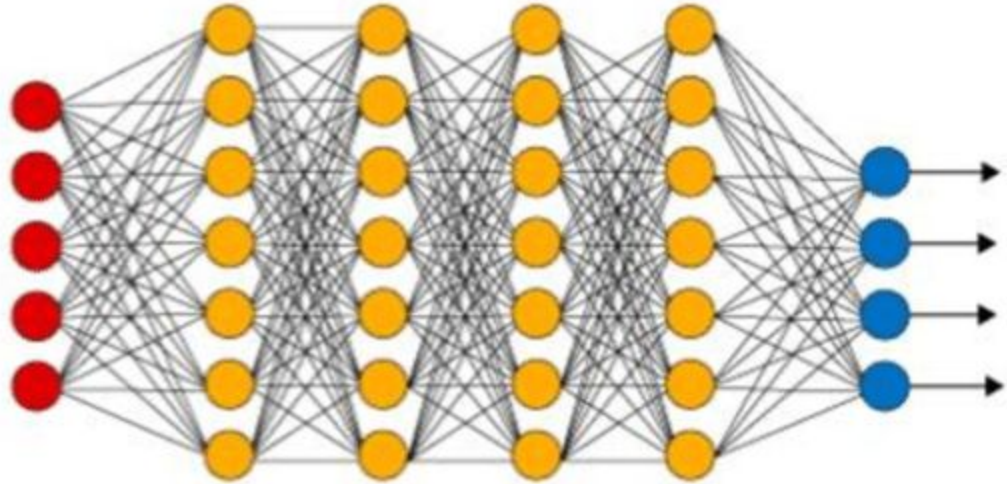


Deep Artificial Neural Network

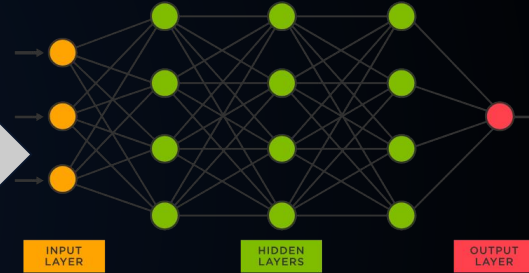
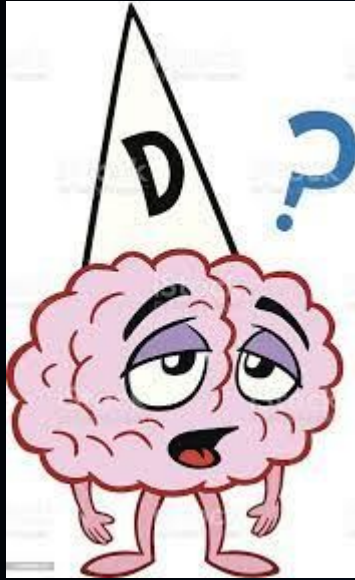
Artificial Neural Network



Deep Neural Network



Steps for Artificial Neural Network



1. Define Model Architecture:
(Dumb Brain)

2. Training: making
the Brain "Smart"

Other: Fixing
Limitation and
Problems
(Refining)