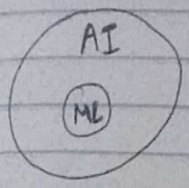
6-9-2021 Monday

Week # 2 lecture # 1



$y = f(x)$

output — input

we write this function on our own

Supervised learning	Unsupervised learning
① we have both x & y like input & output data and try to learn that function	① we only have x as input & we learn output & f the function

More towards supervised learning

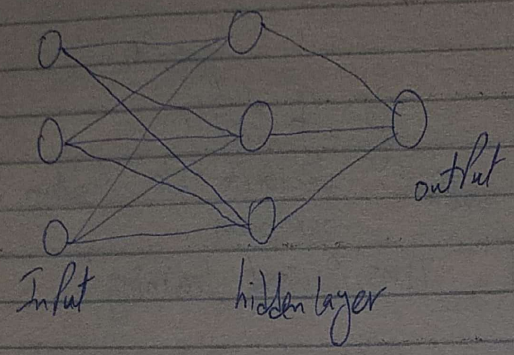
Reinforcement learning:

we have input x, f is reward system, for every x there is reward or something for punishment, so that output tells us if x input is good or not. we don't have any pre-existing outputs

DataSet:

① Training Set
② Test Set

Neural Network:



Deep Neural Network

More than one hidden layers

$y = f(x)$

in DL this would be a very complex function.

In ML it is less complex relatively simple.

$y = f(g(x))$

0, 1, 2

function composition is a lot in DL

Applications:

For performing visual tasks, we use DL, we also go for text as well.

① Machine Translation - convert one lang to another.

Regression problem - output continous number

classification " - classes / Discrete number. mostly use this

② Autonomous Driving.

③ Speech Recognition

④ Chatbot

⑤ Virtual Assistant

⑥ Auto Matic Challan System
⑦ Image Registration
abs. grading

Assignment	5	25	
⑧ Mid	1	20	
Final	12	20	group research later implement, make application like one before.
Project	1	35	