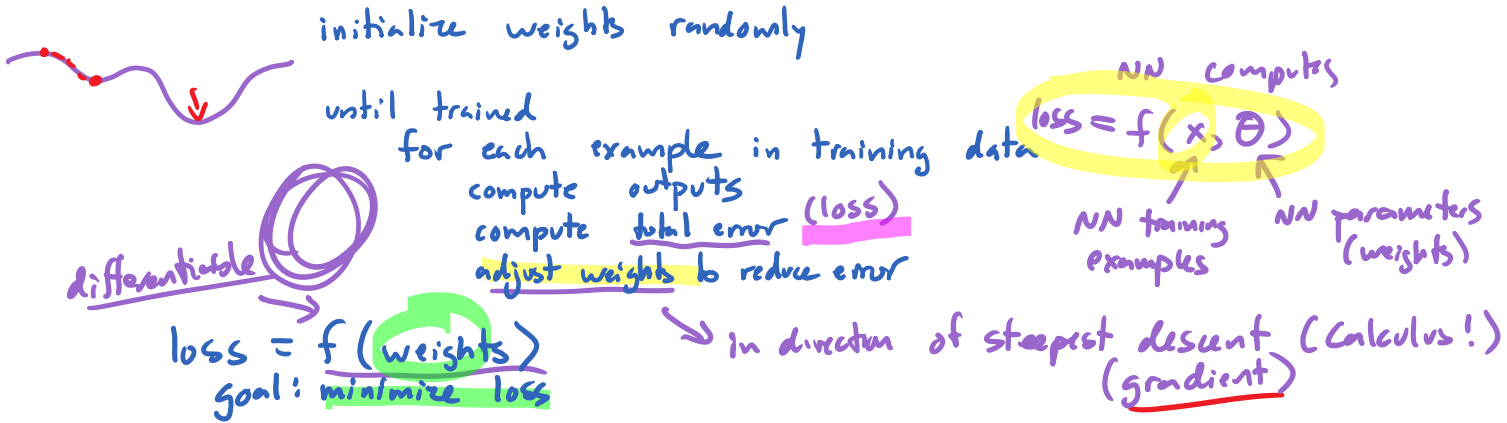


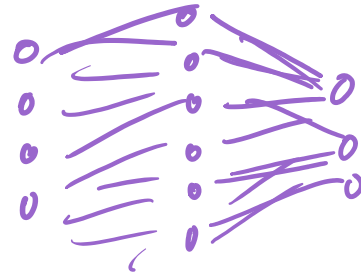
ANN Supervised Learning



regression

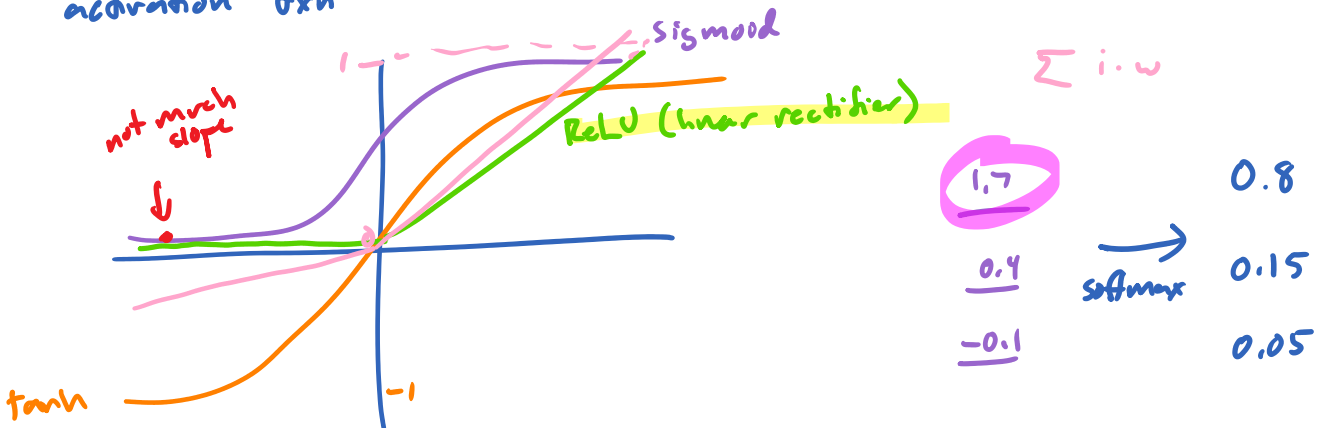


classification



Actual	Predicted	MSE	CE	Predicted	MSE	CE
0	0.25	0.0625	0	0.001	0.000001	0
0	0.25	0.0625	0	0.001	0.000001	0
1	0.25	0.5625	-0.60206	0.3799	0.384524	-0.42033
0	0.25	0.0625	0	0.6199	0.384276	0
		0.1875	0.60205999		0.192201	0.420331

activation fn



Input Representation

Input / Output

categorical

versicolor =
virginica =
setosa =

versicolor: 0
50/50 versicolor/virginica
75/25 versicolor/virginica
50/50 virginica/setosa
50/50 versicolor/setosa

one-hot
0
0
0

	versicolor	virginica	setosa
one-hot	1	0	0
	0	1	0
	0	0	1

date

seconds since epoch (normalized)

Jan 1
0.0

Dec 31
1.0

Jan 1 1900 =
Jan 1 1999 =



month / day / year

a - high
b - low

Jan 1 1900 = 1 1 1900

Jan 1 1999 = 1 1 1999

Jan 31 2020 1 31 2020

Feb 1 2020 2 1 2020

Dec 31 1998 12 31 1998

fuzzy

	Jan	Feb	Mar	...	Dec
	0	0	0	0	0
Jan 1	.52				.48
Jan 10					.3
Mar 15	0	0	1.0	0	0
Nov 16					
Dec 27	.44				.56

rolls
1 1 3 4 6
1 1 1 2 5