	DEEP LEARNING Page No.
	ANN TONN RNN
	Deep learning is a technique which mimics me
1	human brain
	Meural Metworks CANN)
	First new al net was perception
	It wasn't too successful of efficient so
	Jeoffrey Minton
	and the part of the same
	Basic Necwal Net Avan
	INDUT LONGO CO
ı	INPUT LAYER Chametures are provided in this
	fivet layer)
	10-0
LAYERI	3 features / 12-0
	CHodes
	J3-0
	5.2
	Hidden LAYER (there can be many hidden
	Imputager layers)
	treve are four neuron in
LAYER 2	dis hidden layer
	how all inputs from Layer 1
	gets to Layor 2 (hidden layor)
	0

-	Page No. Date
	OUT POT LEWAY OVER
	OUTPUT FINAL LAKER
	hidden layer
	liput
	Output Node
	Every author trans bout layer dets mough
	all me neurons where it is processed and
	Eiven to output neuron
	3 ver o de per mecros
	Output neuron can be one or more
	1 neuron + Singal Classification (binary classification
	2/3 neuron + Multi classification
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	ment is an i
	a compared to the superior to the state of t
9.7.3	was the same of th
	super our answer
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)	
)	

	Page 50.	,
- specient	VIDEO 2 - How neural net works Date	_
of the second		
ð	Forward proposed tion	_
•	Activation Function	1
0	Backword propogation	
	1856	
	Basic working	-
	Input layer	
	×1 O/p Laugy	
	W	
3 Jean	veg ×2 W2	
are pro	pided with	6
in the in	×3. 0	
layer		
0	Newon	-
	5	
	Stepl Step2 > Act Sw. X:	-
	O . C	
Step 1:		-
	We've passed 3 features here x, x2 x3	
01-21	Some weight is assigned to each neuron	<u></u>
Step1.	al passed to one hidden neuron where processing	6
	will occur.	4
		-
100	There are two types of operations which will	6
	nappen in one hidden neuron Stated about	6
		(
Step3	Output is passed to orive layer.	C
1	. 0	
		C
		1
1		100

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	STEP 2 (claborated
0	In the hidden neuron there are operation taking place first being sum of wix; as second being activation function
	when weights and features are passed to hidden neuron this function activates $(\sum_{i=1}^{n} \omega_i x_i)$ $y = \omega_1 x_1 + \omega_2 x_2 + \omega_3 x_3 + bias$
)	here some bias is added externally
>	men this y is passed to the activation function $Z = Act (y) \text{ or } Z = Act (\sum_{i=1}^{n} w_i x_i)$
	Signoid Activation Function
	Equation: 1 where $y = \omega_1 x_1 + \omega_2 x_2 + \omega_3 x_3 + bin$ $1 + e^{-y}$
	this activation function will produce a value blu 0-1 if it is less than 0.5 men the neuron will not get activated if more than 0.5 it will
5	get activated. 7 = Act(v)
) 	One type of Act is Sigmoid Act further puchor
))	7 = 1
÷	

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-	Date Date	_
		-
	STEP 3 (Flaborated)	(
		-
		-
	After hidden neuron processes me info	-
	it gives me output 2 which again is	
	assigned some weight of passed to output	
	layer where again activertion quetion is	
¥5 s	applied and result is given and like	
		_
	if it is a classification problem 0 oil	-
	will be me output.	(
	×1 Ow,	
		-
	X2 O W2 () W4	6
	was multiplication	6
	7 = 2xwy	5
	= AC+(Z)	
	This was an example of Jorward	C
	' () ()	-
	propodation	6
dx.		6
		-
14. 1. 7	a bing of the same and any man and a second	0
5.2.5	ed want med none of a large of it	0
4	the state of the second was the second	-
9	(Ulad & O	0
		6
		6
	,	C
		C
		-
		3

5	Trye No
	VIDEO 3 (Activation Function)
6	
5	2 2 2 2
0	O SIGMOID AF
0	@ RELV AF
۹	C.A.M. O. FUNCTION
٥	SIGMOID FUNCTION
5	mostly used in
	l a la bios orah
•	0.5 Classifica non prob
٥	
	y = Σ ω; x; + b;
\$) i=1
3	· Act(y)
•	O .
•	1+e-y dy, it will be alway
	1+e-y dy it will be alway
•	(means taking mang sero) under 0-1
9	RELU AF
٥	Relument goes (Recopped Linear Unit)
	regardier max (4,0) 2
	fices of houses in for the values
	prediction
mode	most used in
	tirear regression prob.
٥	
3	rely works in simple way, it takes me max of
٥	y and zero, so if y=-ve, max y-ve o
5	zero is ofc zero so it transforms it to zero
3	-
٥	If y = tue, man of a tue number & O is tue
0	num ber
\$	