10 mo Tomas

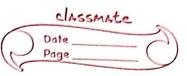
	Artificial intelligence remice human behaviour.
	Contract of the second of the
	Was a superior of the superior
	Hacking Learning 2 10 3 5 1 2 2 10 5 5 10 5 2 10 5 5 10 5 10
	Deep
	Learning
	Arthur Samuel: Gives computers the ability to lear
	will a live a strict of the
	without being explicitly grammer.
	Vice
	1 mput, Data V - + MW W - W - W - W
	Intelligent Sys tem 1209 - 20 20 100 000
	Established to 200 gs - Androf the work separation with the second
	becisions, output, Actions.
	· Descriptive : explains what happened =
	· Predictive : predicte what could
	· Prescriptive: use data, suggest firther actions.
	sogges & norther actions.
	Sometimes solution is not trivial. It may be
	dependent on other fortier. It may be
	dependent on other features (ie, it is not line ar).
	Å v v v v v v v v v v v v v v v v v v v
	General Strategy: Given (x, y)
	Predict Y the minus
ſ	
the fact	and the Plant of the
	dep en dens

1	classmate Date
1	Page
\ <u> </u>	x-> Features 4-> Prediction.
\	N-dim vector
\	· can be entities other than numbers
	· can be entities other  . May be a collection of pictures.  . May be a collection of pictures.  images, where image is
\	· May be a collection of process, where image is
-	vaccion la d'au features)
-	· Sound by KS: Distinguish Sound tracks.
	· Sound by KS: Distinguish soon.  How can we tackle the feature set for sounds
	and classified.
	- when we get datasets, there are too many features
	· Lieset / raw data.
	- we need to find relevant informations that may be
	hidden or rod -
·	Ex: Relevance of two images (are they similar).
1386	- leads to feature extraction: Extracting useful info (x)
	from raw data.
	one hot encoding.
	Representation: From Row data to Features
	10A, 100 del 2de9.
	convert all data into a vector of real numbers: X
	* Ponts in a feature space
	No-0 Yes-1
	ae de la company de la comp
	Convert all predictions into an int/real number: Y
-14	ansert or many a serving a second of
	Ex: Suppose housing data has 'locations'.
	/ how do we deal with categorical data?
1877	Sand and the second of the sec
	how to represent in integers.
	ZNYZDAG / ZNODAGOT BAR OF OPLE JA JERUS. LODIS
wat a	2012 209 12100 1217 SHE

	040016370
	Programming: Machine learning
	Data Program Data: X Output: You New Data: X
	Computer phase computer so
	Compoter phas?
	T onthot: A,
	Output Program: f(X)Y)
	× , × , ×
	7 31 2 2
	ML Based Train-Test Data
	LIT PASKS HAVILLIAN
	labelled data : soit per ses
	1
-	Training Data Test Data for
	[w samples] remaining N-w
	Samples
	*tearning is concerned with accurate prediction of future data
i	Better Prediction - Mc model strong
	22200 legent well.
	SUMMARY (Tobo source 20 mgs) laxy? was 20 pers -
	Y = OF (2) brind Printpul quid
	olp / L feature/representation
	Prediction Superior Como 79 de 2000 1000 Wash
2000 A	to still and led the pury.
1, A-2	Note: Training and Teshing set comes from some
	Admin & reddistributions and the same reduction many
	A CHANGE A CONTROLLED TO THE STATE OF THE ST
	(concept rof iid) ?lexis ele to mo
	TShrowy my brown house to to was
- 4	mischel Lete -

	me implet is converted to a vector x.
	· me imput is converted to
<u>Lew</u> 1 - pro- 9	me imput is converted to melicated by y.  The output is a value indicated by y.
	depending on nature
10 mm	· regression
	· classification
	Explicit program
	x, x2 x3 Y
	2 3 16 7
	5 8 11 300 1227 - NOVER 1502100
MANUFACTURE OF THE PARTY OF THE	
	2x + 3y + 16z = 7 dob bulledal
	5x + 8y + 11Z = 3
	phod of yearst
	Feabre extraction: way of giving date to Midate.
*	Representations:
	- in ML, it refers to the way data is transformed
	or encoded into a format that is suitable for.
	a learning algo to process.
	- Images: Row Pixel Representation
	perp learning based features.
and the state of t	
	how can we diff two images?
	· they can be pixelized.
	each pixel has a different color.
	· Each number has all the info Carried by a number
	- Som of all rixels
	> Number of boundary Fixels Pixel Analysis
	-> Edge detection

Pode



-	Instead of us to find best features to distinguish blue
	2 mages, let ML model and out => DEEP LEARNING
	7 1 3 10 0 1
	-> SOUND: waveform representation, spectrogram represent?
-	Mel-frequency Cepstral Coeff (MFCC)
k	Mel-frequency lepse wavelength, wave frequency.
-	Technique by which given wavelength, wave frequency.
	Les la Regular & Spam messages
-	-> Text data: Differentiate
-	Approaches, 2 mp in host moder simply as a -
- Constitution of the last	· N grams
-	20 man 2 Bag of wordsortin , 20 mas of identity
-	· Term frequency = Inverse Doc frequency
-	moral Embeddings. with so me stock.
-	Complex data - women's days
-	Ex: N grams: one file/doc about happy
-	one file/docabout sad
-	check frequency cat which words are repeated
1000	or even synonyms.
	or combination of words
	helps distinguish blu documents
2	J - J
_	Ex: Bag of words
1	S1: weather is sunny today
_	82: weather was rainy today.
_	SL.
_	Represent these sentences in form of a vector
_	and then distinguish.
	Conv text docta into numbers.
	Conv text

Now: very good, boilg highly quality datasets why Al? Proficient ML models, improved architectures protokas as an - Massive parallel computing - software platforms, cloud compute, API's libs, - New Regularization techniques, Robust optimizers. · Identify features, without good features may loseout on imp relations. Is more ment · Data can be inform of mage, Sound, data. complex data - Numeric data Ex. is grown : one fielder about 1977 EXZ JUBLIO 266 1 21 4 AMO 234-39. check trequency at which some to androwed to strange and dairentsip same pained human six waster and enter a to min 11 enteress as all the servery edgioportals made Enp 2 valetimes above palas to soly cro