2011	Machine Learning		
*	ML South May be to the state of the state of		
71	Subset of AI was considered		
→	Fraining also to automatically learn patterns		
1 X	Type of home or minder : and have made a		
>	supervised: Labelled data		
10 ->	Unsupervised: Unlabelled data		
	Reinfouced: Feedback learning		
*	Applications of MIL: No bost with a delivery del		
->	Natural Language Processing		
7	Frand detection cyber security		
٠٠٠)	thealth diagnes > mreat detection		
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Fouecasting of whom some a series of a		
	the state of the state of the course of the state		
×	Types of problems in supervised learning?		
7	Regression problems		
	+ Fredicting a continuous value		
.94 U.S.	> Goal 7 To leaver mapping function		
2)	Clasification problems		
	a produce and first property security of		
X	Algorithme weld:		
	supervised Unsupervised		
	linear regression K-means clustering is		
	Logistic regression Association rule mining		
	Decesion Toels Principal Component Analysis		
	Newal Networks : scienceschial chretering		

Å	Evaluation et performance:		
	supervised	Unsupervised	
	accuracy	using internal evaluation metrics:	
	Precision	anusian - separation	
	Recall	Using enternal evaluation metrics	
	F, ecare	-> Privity -> Entropy	
	Area under ROC a	ransing of position	
	II 5	infolating weights of blades	
*	Deep learning:		
	+ subset of ML	or makers election.	
inzet	- Usel artificial reuval metroserks to contract features		
	from data of to make proedictions		
	e production de la color de la		
*	Deep learning medels:		
40 50	-> CMM = Convolutional Neurol Network		
	-> RNN : Receaser	it soural Network	
	-> GAN: Gonerative	2 Adversarial Metwork	
- E- 1	Englises react 80 english		
*	Applications of DL		
-	self-edviving incarn som som some		
→	NLP word production some a		
- 	speech recognition		
ر ِ	Medical ing anal	4866	
1-10-1	10000	Fearure to anceward	
*	Neutal Network: My	L model inspired in all a sol	
	of human Loain.	Consists interconnected neurous to	
No	transmit lingo.	Consideration of the contract	
22	19thing Reliched converte	Britmin -	
- 11			

Types of layers in neural retworks Input layer non - riddless layer ontput layer Recall Vising instronal evaluation in Back probagation: Algo used to train Neural Networks by updaling weights & biases of neurous. * Feature Relection: selecting mest relavant features from dataset -> Importance: store & sould many -> Prevents : exenfetting rise out doct Arousen Inspécial reprostraining times -Features engineerings orthogon MAD 5 -> Cocating new features from entiting and. -> Importance: -: 10 10 monarior -> captures more meaningful info > Improves predicting power 911 speech recognition * Techniques for: jeasure orginarings Feature Engineering Feature selection madel inspired by stone source + Scaling 12 1500 Historio - Filter methods 7 Normalization I wrapper methods > binning > embedded methods

	Do A D. Maria			
	Definitions:	and the and display in stources		
	Accuracy , pencentage y co	- sierry pour de la souitient		
2)	· Precision - Proportion of tour	Posetives out of all positives		
3)	o Recall - Morportion of tour	positives out of all actions the		
4)	FI score -> Harmonic mean	of precision of recall		
E		<u>'</u>		
*	Over Litting	Underfitting		
	madel becomes overly	model becames too simple &		
	complex & gits data too	doesn't cupture patterns in data		
	closely			
-	Prevention: cross-validation	Prevention: Increase model complexity		
	regularization	Collect mane deta		
	Early stapping			
	0 11 0	+		
*	Reinlowe unt learning: Mal	se décision manuels la poble a de		
Λ		se decisions through feablack		
	in form of remarks & pun	shuerte Goal: Manimire reward		
1				
	Applications Al	go used: learning,		
->	game playing > 0-	learning,		
	Robatics > SAI			
→	Optimizing problems - Deep	reinforcement learning		
	Reconsendation eyetems	U		
*	* Performance Fralnation			
+ Performance Evaluation -> computing cumulative reward s.				
- Confusing Currocont				
八				
Y				
- 11				