








deeplearning.ai

Introduction to Deep Learning

Supervised Learning with Neural Networks

Supervised Learning

Input(x) 	Output (y) 	Application
Home features	Price	Real Estate
Ad, user info 	Click on ad? (0/1)	Online Advertising
Image	Object (1,...,1000)	Photo tagging
<u>Audio</u>	Text transcript	Speech recognition
<u>English</u>	Chinese	Machine translation
<u>Image</u> , <u>Radar info</u> 	Position of other cars 	Autonomous driving

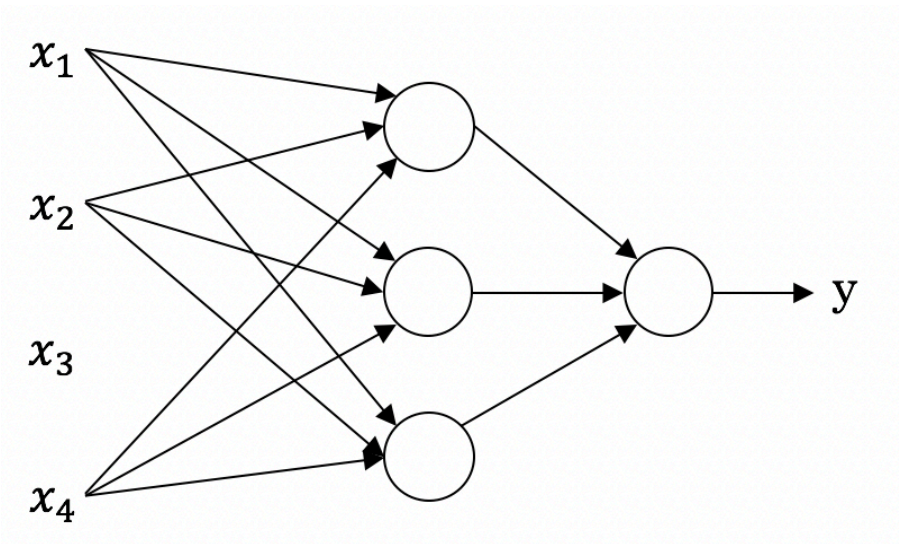
} Standard NN

} CNN

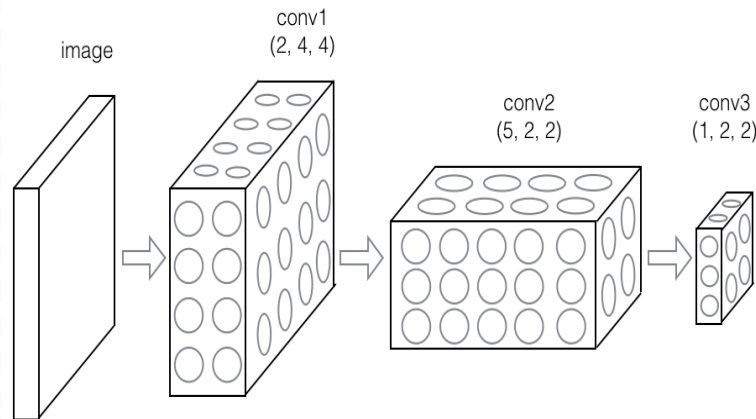
} RNN

} Custom/ Hybrid

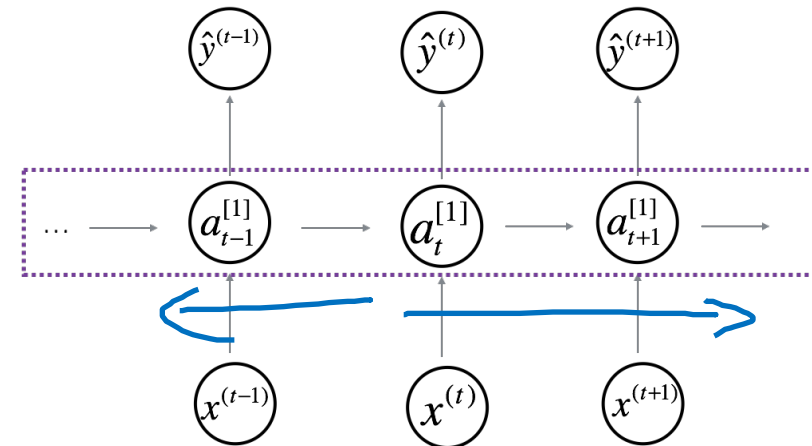
Neural Network examples



Standard NN



Convolutional NN



Recurrent NN

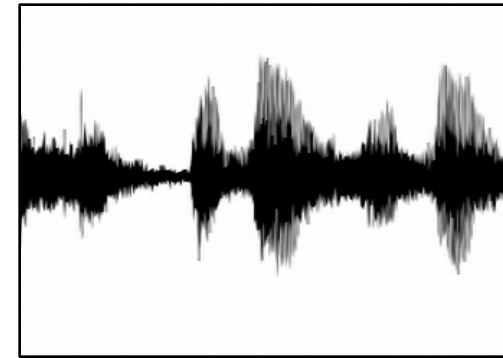
Supervised Learning

Structured Data

Size	#bedrooms	...	Price (1000\$s)
2104	3		400
1600	3		330
2400	3		369
⋮	⋮		⋮
3000	4		540

User Age	Ad Id	...	Click
41	93242		1
80	93287		0
18	87312		1
⋮	⋮		⋮
27	71244		1

Unstructured Data



Audio



Image

Four scores and seven
years ago...

Text