Introduction to Deep Learning

Supervised Learning with Neural Networks

deeplearning.ai

Supervised Learning

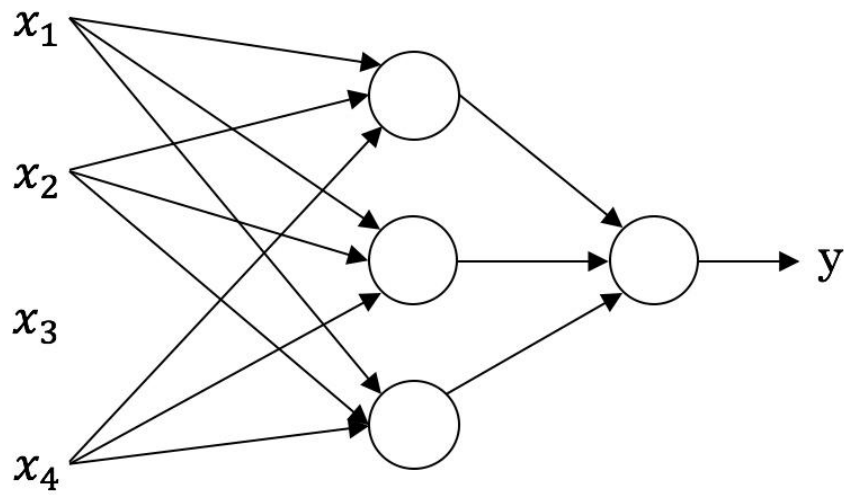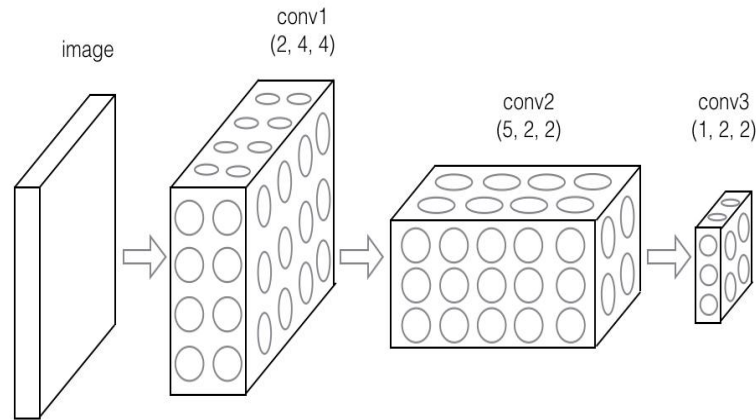| Input(x)	Output (y)	Application	
Home features	Price	Real Estate	⎫ Standard NN
Ad, user info	Click on ad? (0/1)	Online Advertising	⎬
Image	Object (1,...,1000)	Photo tagging	⎬ CNN
Audio	Text transcript	Speech recognition	⎫ RNN
English	Chinese	Machine translation	⎬
Image, Radar info	Position of other cars	Autonomous driving	⎫ Custom/ Hybrid

Neural Network examples

Standard NN

Convolutional NN
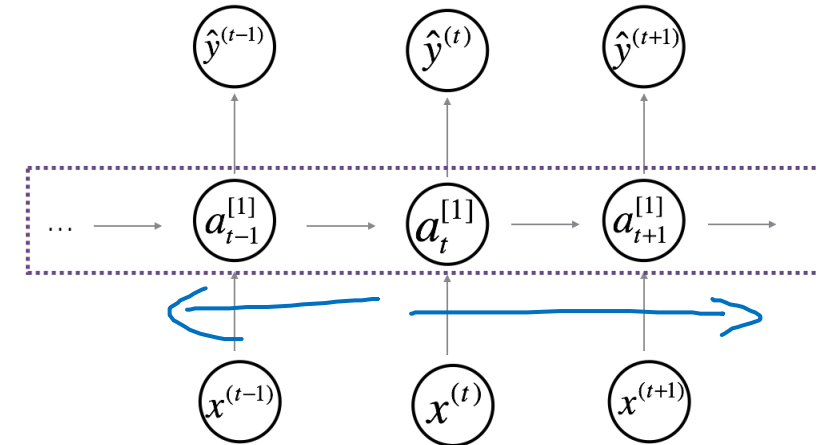
Recurrent NN

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
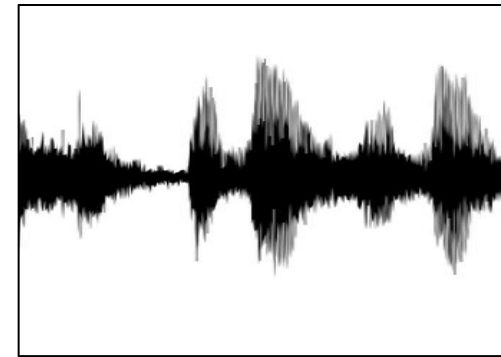
Audio

Image

Four scores and seven years ago...

Text