

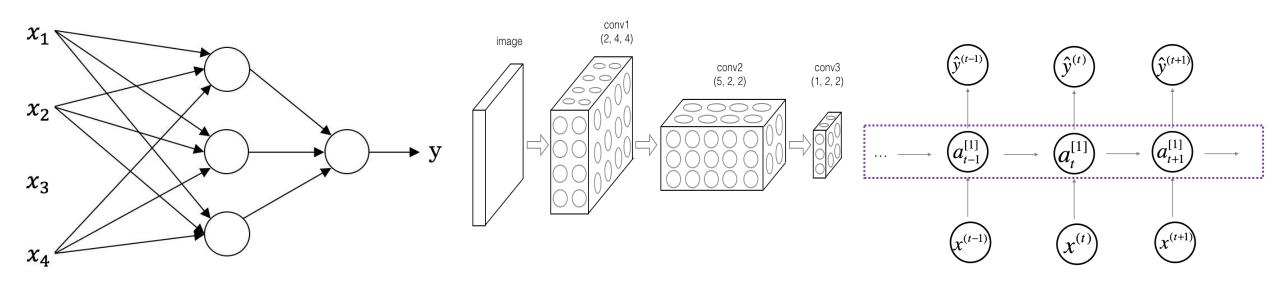
Introduction to Deep Learning

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
Audio	Text transcript	Speech recognition
English	Chinese	Machine translation
Image, Radar info	Position of other cars	Autonomous driving

Neural Network examples



Standard NN

Convolutional NN

Recurrent NN

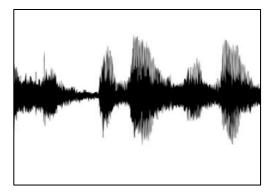
Supervised Learning

Structured Data

Size	#bedrooms	•••	Price (1000\$s)
2104	3		400
1600	3		330
2400	3		369
:	:		:
3000	ig 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