

第一周 深度学习概论

what is neural network?

example 1 - housing price prediction

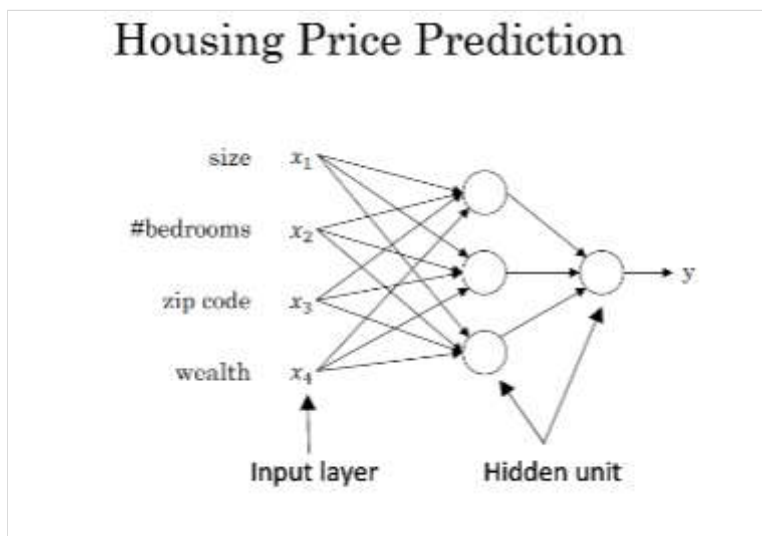
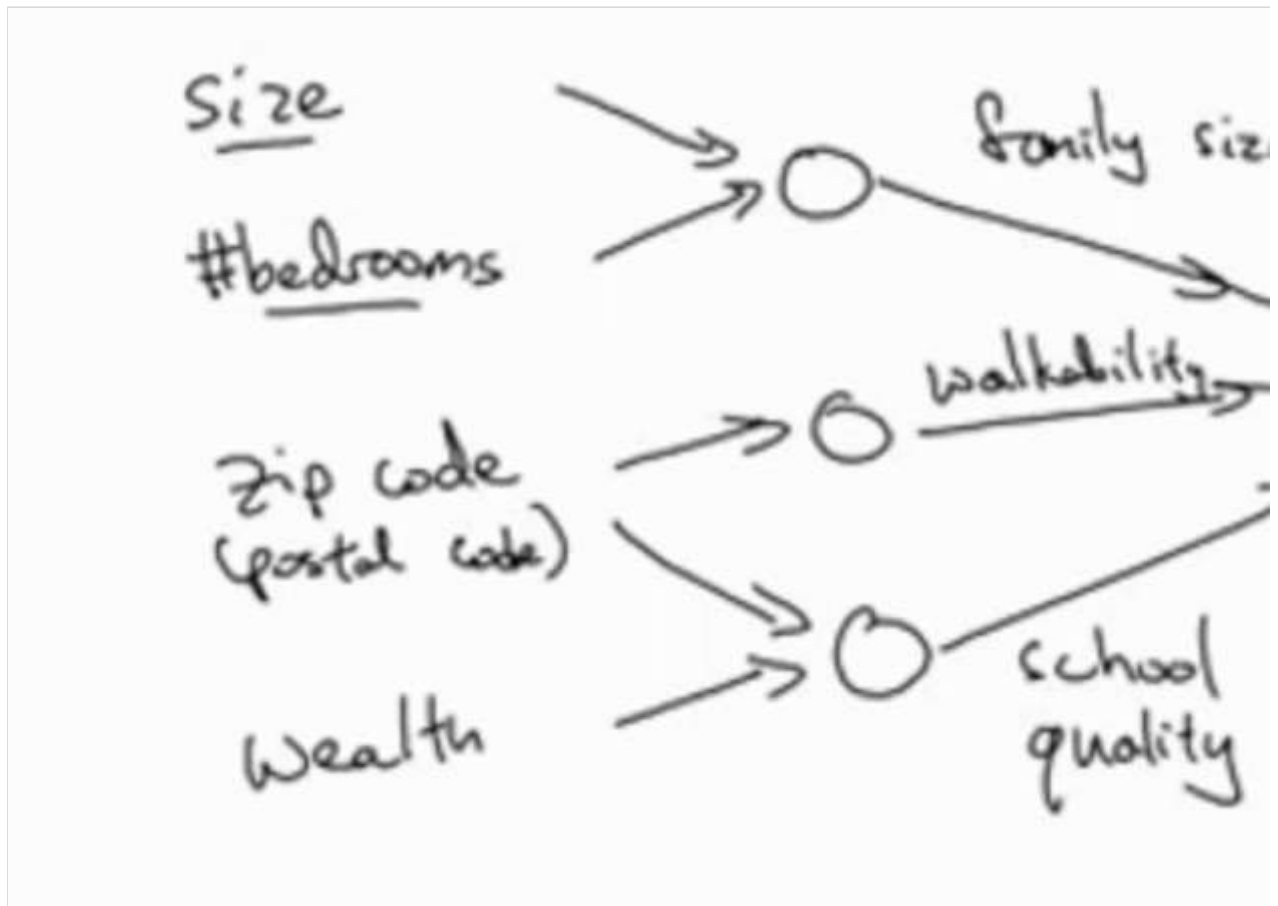


the neuron(神经元)implements the function ReLU(retified linear unit) 修正线性回归

example 2 - multiple neural network

the price of a house can be affected by other features such as size, number of bedrooms..

by stacking together a few of the single neurons -> we have larger neural network



supervised learning for neural network

supervised learning:

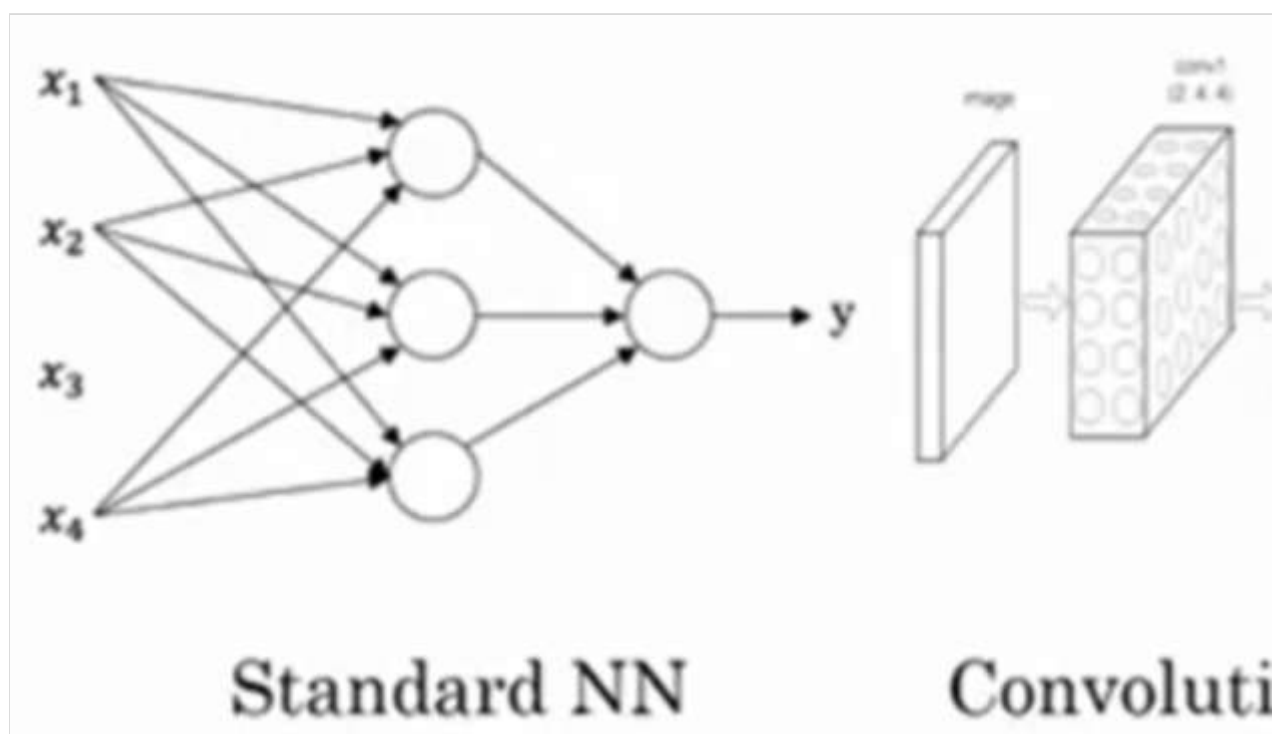
structure data(excel)、unstructured data(video, image)

photo->cnn time->rnn autodriven->mix nn

thanks to neuron network ,computers are now much better understanding unstructured data.

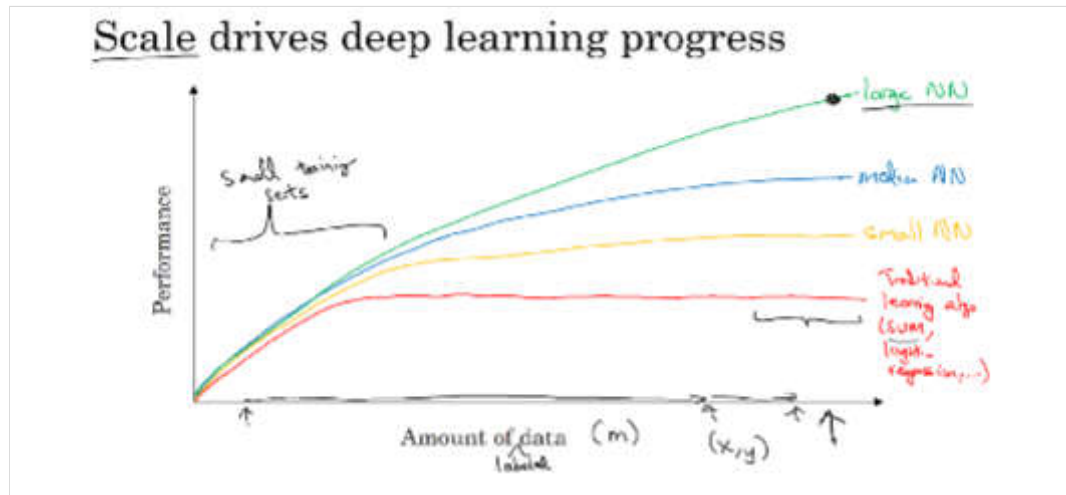
Supervised Learning

Input(x)	Output (y)
Home features	Price
Ad, user info	Click on ad? (0/1)
Image	Object (1,...,10)
<u>Audio</u>	Text transcription
<u>English</u>	Chinese
<u>Image</u> , <u>Radar info</u>	Position of car



why is deep learning taking off

in small data ,the performance depends much more on your skill at hand engineer features



about this courses

Outline of this Course

Week 1: Introduction

Week 2: Basics of Neural Network programming

Week 3: One hidden layer Neural Networks

Week 4: Deep Neural Networks