Wednesday, December 25th, 2024. Introduction to Deep Learning. Week 1

ReLU
Rectified
Linear
Unit

O — neuron

Size

\# bedrooms

zipcode
(postal code)

wealth

family size

walk ability

School quality

x
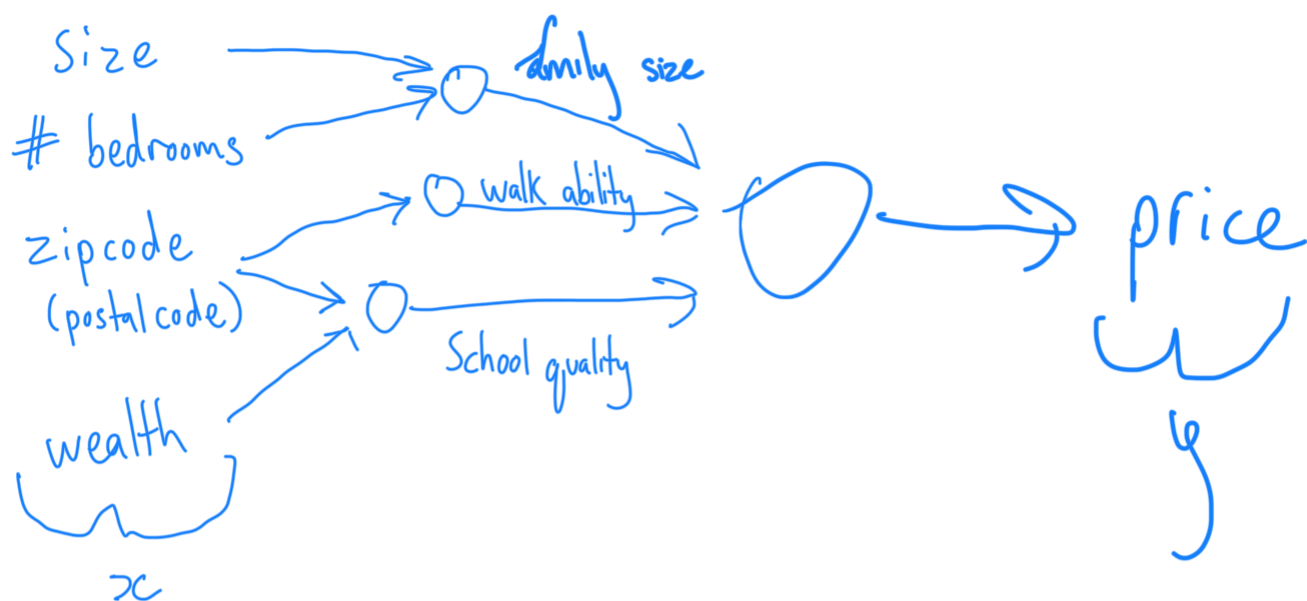
price

Every input layer feature is interconnected with every hidden layer feature

Supervised Learning

Input (x)	Output (y)	Application	
Home Features	Price	Real estate	standard NN
Ad, user info	Click On Ad ?(0/1)	Online advertisement	
Image	Object (1, ..., 1000)	Photo tagging	CNN (convolutional neural network)
Audio	Text transcript	Speech recognition	RNN
English	Chinese		(recurrent neural network)

English | | Machine translation] (Recurrent ...
Image, Rador info | Position of other cars/Autonomous driving } custom NN
                                                          Hybrid NIV

Types of data

Structured data – databases

unstuctured data – raw audio, images , text

Scale drives NN. More data = better performme

Algorithms speeds up computation.