① What is a Neural Network

- Simplest Neural Network
    Linear Regression (st. line)

ReLU (Rectified Linear Unit)
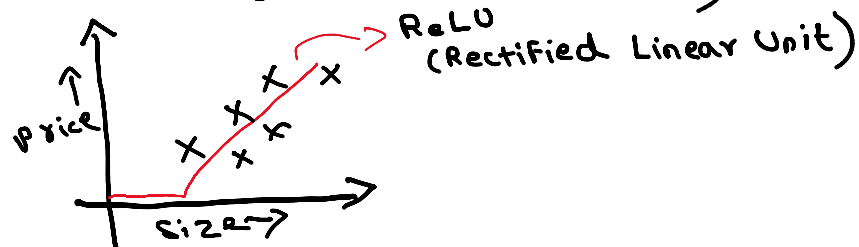
- eg: House price prediction

hidden unit (takes all inputs & figures which one to weigh more)
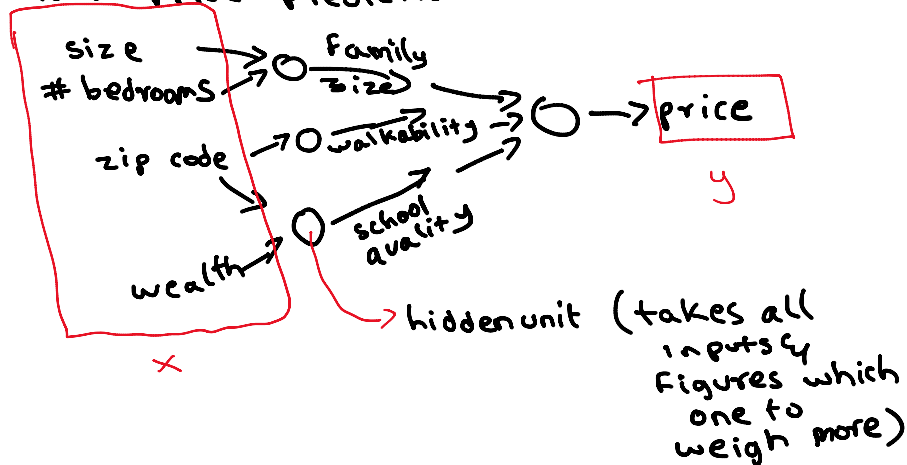
price
y

② Supervised Learning with Neural Networks

Supervised Learning

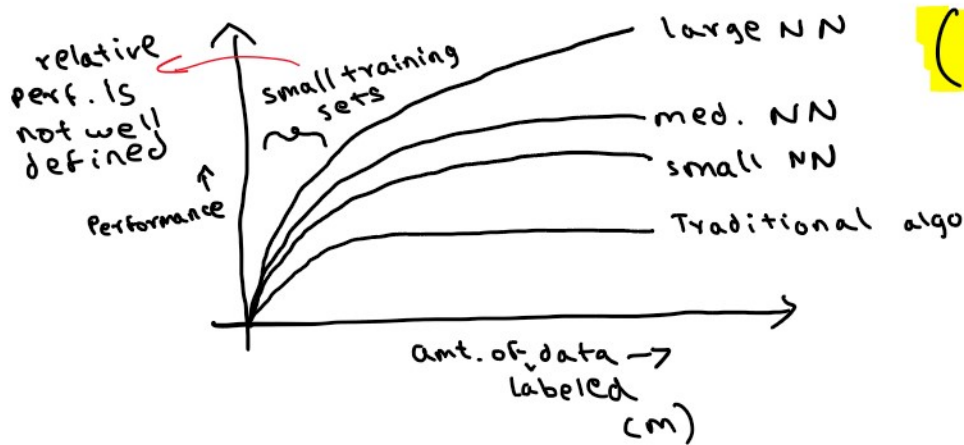| Input(x)	Output (y)	Application	
Home features	Price	Real Estate	Standard NN
Ad, user info	Click on ad? (0/1)	Online Advertising	
Image	Object (1,...,1000)	Photo tagging	CNN
Audio	Text transcript	Speech recognition	RNN
English	Chinese	Machine translation	
Image, Radar info	Position of other cars	Autonomous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

Structured Data

size	# bedroom	...	price
∴	∴	∴	∴

Unstructured data
Audio, Images,
Text

③ Why is Deep Learning taking off?

relative perf. is not well defined

Performance

small training sets

large NN

med. NN

small NN

Traditional algo

amt. of data →
labeled
(m)

Scale drives DL progress

→ Data (more data)
→ Computation (high perf. compute resources)
→ Algorithms (improved algorithms)
(like sigmoid → ReLU)

→ Faster training speeds up

Idea cycle
Code
experiment → Train
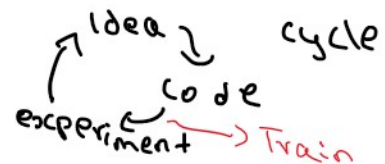
④ About this course

→ week 1: Introduction
→ week 2: Basics of NN programming
→ week 3: One hidden layer Neural Network
→ week 4: Deep Neural Network

Q: What is the correct technique of entering a numeric answer to a text box question ? A: Coursera's software for numeric answers only supports '.' as the decimal delimiter (not ',') and require that fractions be simplified to decimals. For answers with many decimal digits, please use a 2 digits after decimal point rounding method when entering solutions if not mentioned in the question.

Q: What is the correct technique of entering a 1 element matrix ? A: They should be entered as just the element without brackets.

Q: What does a A being a 3 element vector or a 3 dimensional vector mean? A: If not described a vector as mentioned in the questions is $A = \begin{bmatrix} element1 \\ element2 \\ element3 \end{bmatrix}$.

Q: I think I found an error in a video. What should I do? A: First, post it on the Errata forum. We will try to implement your feedback as soon as possible. You could also send us an email at feedback@deeplearning.ai.

Q: My quiz grade displayed is wrong or I have a verification issue or I cannot retake a quiz. What should I do? A: Contact learner support. These queries can only be resolved by learner support and it is best if they are contacted directly. Do not flag such issues.