


ADVANCED ALGORITHMS

Neural networks
Decision trees
Practical advice

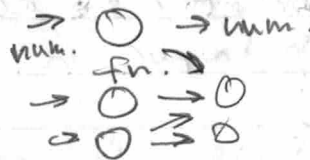
NEURAL NETWORKS

Original idea: mimic how the brain works.
Still used as a metaphor even if the implementation has evolved. Now we call it Deep Learning but it's just NN. Applications include image + speech recognition, NLP, etc.

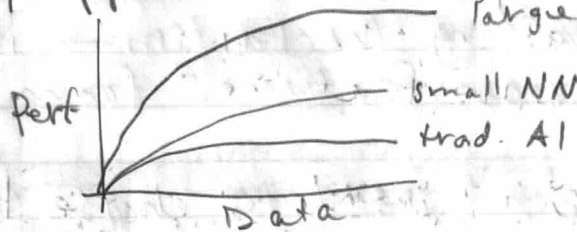
Brain: neurons in a network



Artificial NN: simplified math model of neuron



Why has this taken off only recently for many applications? Big Data. Large NN



Example: Demand Prediction (product sales)

- sell t-shirts

- for each: top seller? yes/no

- logit now used as activation fn. for one "neuron" / node that computes probability. need to wire them together.

- we have several features: price, material, marketing, ship cost. Use neurons to combine them, then combine those outputs

