Deep Learning

1. The Human Brain
   1. Contains billions of neurons, which pass electrical signal to each other
   2. Neurons can take electrical inputs from several connected neurons; the output will depend on whether an appropriate threshold was exceeded
   3. Replicating the same number of neuron-modelling nodes in a computer is not possible with today’s technology
2. Neural Networks
   1. To simulate the neuron to neuron network of a human brain at a smaller scale, we can create a deep learning environment with layers of node
   2. These artificial “neurons” are set up as nodes which receive inputs, perform a function on the input, and send those messages along towards the output
   3. These neural networks can be visualized with a flow chart that represents the decision-making process
3. Modeling Neural network
   1. Each circular node receives several weighted inputs
   2. The node then outputs a function result based on whether or not the node threshold was reached
   3. Layers of these decisions eventually result a conclusion
4. Artificial Neural network setup
   1. Process data
      1. Import dataset
      2. Import dataset code and split
      3. Scale data
   2. Create neural network
   3. Analyse result