DNN

Experiment 1

1) Define Artificial Neural Networks

1) An Artificial Neural Network is a computation system inspired by the design of human brains that uses interconnected nodes or artifical neurons assembled layer to learn patterns from data and make decisions.

2) State the requirements of McCulloch - Pitts Model.

2) Requirements of McCulloch - Pitts model.

1) Binary inputs - all the inputs to the neuron must be binary in nature.
2) Binary output - the neuron produces a beniary output
3) Fixed synaptic weight - the weights do not change with the input i.e there is no learning and adaptation.
4) Fixed threshold - the neuron has a fixed threshold it only fires with the weighted operation on the input crosses the threshold.

3) What are the applications of McCulloh pitts model?

3) It can be used for modelling logical functions
It is a foundation on which artificial Neural Networks are built.
It can be used to design simple decision making systems.

4) What are the drawbacks of the McCulloch-Pitts Model?

4) 1) It is a very simple model and does not take into account complex logic functions

2) There is no adaptations in the weights of the input i.e model does not learn or adapt to improve decision making.

3) Only uses binary inputs and works on binary outputs reducing the amount of knowledge density that can be taken into account for decision making.