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**J009**

**B.Tech (Data Science) – 3rd Year**

**J1 Batch**

# Practical- 5

**Aim:**

To understand and build layers for the **Pima Indians onset of diabetes dataset**.

**Observations:**

* On the above mentioned dataset, we built a neural network to classify which people are most likely to be diagnosed with diabetes.
* There are 8 input variables.
* A network with 3 dense layers was made, varying their hyperparameters according to what was found to be most suitable.
* The first 2 layers were ‘relu’ activation function, while the final layer was using ‘sigmoid’ activation function.
* The model was compiled using the ‘adam’ optimizer and ‘binary\_crossentropy’ loss.
* The model was then fit in batches of 10 for 150 epochs.
* The accuracy obtained was 65.1%.
* By varying the hyperparameters of the layers more, we get to see different accuracy values.

**Inference:**

Learnt how to select the right number of layers, and choosing of appropriate hyperparameters while building a neural network for classification.