

Practice Problems 8

May 31st 2022

Machine Learning - 2022-I

1. Build and train a **keras** sequential model to classify digits from the *mnist* dataset. The model must have a hidden dense layer of 128 neurons with a *relu* activation function.
2. Now build and train a **keras** functional model for the same problem. The model must have a hidden dense layer of 128 neurons with an activation function defined by the following function:

$$\text{activation}(x) = \begin{cases} 0 & \text{if } x < 0 \\ \sin(x - \frac{\pi}{2}) + 1 & \text{if } 0 \leq x \leq \frac{\pi}{2} \\ x - \frac{\pi}{2} + 1 & \text{otherwise} \end{cases}$$