

	SR UNIVERSITY Campus Warangal
	Program: II - B.Tech (CS& AI)
	Professor(a): Dr. Ramana, Dr. Ali, Dr. Amit, Dr. Mamta, Dr. Sridhar
	Department: Computer Science and AI Semester: II Generative AI - Assignment - 9.3
Instructions: 1- Students needs to assume if any data is missing and that is necessary to solve	

1. (1 ponto) Design a multilayer ANN architecture to identify the hand-written digits using the **Keras** deep learning library. Consider the MNIST data set
2. (1 ponto) Calculate the accuracy with training and testing data
3. (1 ponto) Also, change the architecture by tuning no. of hidden layers, no. of hidden neurons and activation functions in hidden layer. Identify best architecture in terms of testing accuracy

Tabela 1: ANN Architecture

Layer	Neurons	Activation Function
Hidden Layer - 1	128	swish
Hidden Layer - 2	128	swish
Hidden Layer - 3	128	swish

Tabela 2: Training Parameters

epochs	batch size	error metric	Optimizer
30	32	accuracy	adam

Dataset: MNIST

- **Expected learning Outcomes from this assignment related to python**
 - Students are able to build ANN model with python deep learning libraries to classify hand written digits
 - Students are able to measure training and testing performance of trained model
- Last date to submit: 28.03.2025
- Date of activity: 28.03.2025
- Naming convention
 - Report File Name: RollNo_Week No._Assignment No.

Date: 2025-03-21