

	<b>SR UNIVERSITY</b>	
	<b>Campus Warangal</b>	
	<b>Program:</b> III - B.Tech (CS& AI)	
	<b>Professor(a):</b> Dr. Venkataramana Veeramsetty, Professor	
	<b>Department:</b> Computer Science and AI	<b>Semester:</b> II
<b>Generative AI - Assignment - 8.1</b>		
Instructions:		

1. (1 ponto) Design a multilayer ANN architecture according to the requirements shown below. Train, test, save (.h5) and deploy the model to predict the quality of wine using the **Keras** deep learning library
2. (1 ponto) Calculate training and testing accuracy, build confusion matrix, also calculate recall, precision and F1-score.
3. (1 ponto) Build the application by loading the saved ANN model.

Tabela 1: ANN Architecture

Layer	Neurons	Activation Function
Hidden Layer - 1	16	relu
Hidden Layer - 2	20	relu
Hidden Layer - 3	25	relu
Hidden Layer - 4	10	relu

Tabela 2: Training Parameters

epochs	batch size	error metric	Optimizer
100	64	accuracy	adadelata

**Dataset:** [https://drive.google.com/file/d/1uutPAkOSYb2Uror1mk2dZUtoYbCgz6D0/view?usp=drive\\_link](https://drive.google.com/file/d/1uutPAkOSYb2Uror1mk2dZUtoYbCgz6D0/view?usp=drive_link)

- **Expected learning Outcomes from this assignment related to python**
  - Students are able to build ANN model with python deep learning libraries
  - Students are able to deploy trained ANN model
  - Students are able to measure training and testing performance of trained model
- Last date to submit: 12.03.2025
- Date of activity: 12.03.2025
- Naming convention
  - Report File Name: RollNo\_Week No.\_Assignment No.

**Date:** 2025-02-23