Arkansas Tech University
Graduate College, Information Technology
INFT 6903 Data Science, Summer 2022
Assignment 9 / Due date: August 1st, 2022 before midnight. Total points: 100. Good luck!

Important Note: You can use any kind of Python compiler for this assignment. Also note that, some of online compilers **do not** support/provide some data science libraries like Numpy and Pandas. We will continue using *Anaconda* and *Jupyter notebook* in data analysis and machine learning algorithm development (clustering and classification). Therefore, I recommend using *Anaconda* and *Jupyter notebook* in this assignment. Please also find the *Instructions to Download Anaconda and Jupyter Notebook* pdf file from Blackboard under the Week5 folder.

Anaconda and Jupyter notebook: https://www.anaconda.com/
Google Colab: https://research.google.com/colaboratory/
Onlinegdb: https://www.onlinegdb.com/online_python_compiler
Replit: https://replit.com/languages/python3
Downloading&Installing a Python editor from the Python website: https://www.python.org/

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1. (*50 points*) Download the sample data set from the Blackboard Week9 folder. Implement the support vector machine (SVM) method to this data set in Python. Also, show the confusion matrix and normalized confusion matrix on the console.

2. (*50 points*) Download the sample data set from the Blackboard Week9 folder. Implement artificial neural networks (ANN) method to this data set. Then, find the prediction results of the following three test samples.

test1 = [3,4,10,7]

test2 = [2,0,5,1]

test3 = [1,1,2,8]
