

**Report Template (LaTeX):** [CSCE633 - Template for HW5 Write-Up.zip](#) ↓

## **1 Due Date**

Your submission, which is your code and your written write up, will be due on Friday, April 26, at 11:59 PM. You will submit your trained results to Kaggle. You will, on canvas, turn in a zip file, named `firstname_lastname_UIN_HW5.zip` which will have your Python code, your pdf of your write up, and any other supplementary information we need to evaluate your result.

## **2 Dataset**

The dataset for this assignment can be found under the Data tab on Kaggle. You will be developing a machine learning model for digit classification using handwritten images and audio.

## **3 Modeling**

You have to create a model that predicts the probability of different digits in the MNIST dataset. There are no requirements for the type of model you use. You are looking to beat our F1 score. You can view it on the Leaderboard on the Kaggle page. You will receive full marks on model performance section if you beat the best performing benchmark, i.e. `benchmark_03`.

## **4 Report Writing**

In addition to your code, you will write a conference-style report. This written report will follow the template provided. You will be required, in latex, to write a full description of the problem being studied, important references you found helpful in developing your submission, and a clear description of your implementation and experimentation - aside from the KAGGLE results, this description is how you provide confidence that you believe you implemented the model with high accuracy on any held out test set we apply it to.

### **4.1 Submission Process**

Please report your project in detail, including your data preprocessing, model structure, hyperparameter tuning, and model performance evaluation. Your submission to Canvas should include your code, your Latex file and PDF of the report, and any additional supplementary material that is necessary.