Term Project for CS367 & CS780

Goal: To expose students to research in image processing
Submission: The blackboard drop box, one submission per team
Team composition: Two students at most

Requirement:

1. You **design** your own method or **modify** existing algorithm(s) to process and recognize images of handwritten digits. The dataset, data.zip, is available on Brightspace. You have to use the specific dataset for this project. You should clearly cite the source of ideas if not your own.
2. The implementation can be in any language of your choice
3. CNN should not be considered since the part on image processing/feature extraction is fully automated.
4. A report in NeurIPS style, containing
    a. Abstract (5%)
    b. Introduction (motivation and problem definition) (10%)
    c. Literature review (10% for CS780)
    d. Methodology (detailed description of your algorithm) (35% or 30%)
    e. Implementation & Experimentation (35% or 30%)
        - Description of the dataset
        - Description of performance measurement, confusion matrix, per-class accuracy and overall accuracy
        - Validation process
        - Results
    f. Discussion and conclusion (10%)
    g. References (5%)
    h. Appendix: Documentation of team member contributions if not an individual work.
4. NeurIPS format can be found at: https://media.neurips.cc/Conferences/NeurIPS2019/Styles/neurips_2019.pdf. NeurIPS-Example-Paper.pdf is an example paper for your reference. Please pay attention to content page limit (8). References and the appendix are not considered content. A report not in NeurIPS format will receive 10 points penalty.

Materials to hand in:

1. The final report

2. Well-documented source code