CPS 843/CP8307 Final Project Report

Due Saturday, December 16th, at 11:59pm (20 points)

Every student is required to complete a project as an essential component of this course. The selection of project topics is open to individual discretion, encompassing subjects within the domains of image processing, computer vision, or pattern recognition. These topics may be chosen based on personal interest or as an integral aspect of ongoing research endeavors.

Purpose

The objective of this project is to facilitate comprehension of a computer vision problem. This includes an in-depth understanding of the problem's intricacies, a grasp of the current state-of-the-art solutions, practical exposure to the implementation of one or more algorithms aimed at resolving this issue, and the acquisition of basic research skills.

Requirements

- CPS 843: Group work is highly encouraged. You may work on the project in a group of 2-3 members. You may also choose to work independently.
- CP 8307: For students enrolled in CP 8307, you must work independently.
- Enroll yourself in a group on D2L by November 6th, even if you are working independently.

General Guidelines

- The report is due on Saturday, December 16th, at 11:59pm. Late submissions will not be accepted.
- Use IEEE double-column format. The Word and LaTex template can be found at http://www.ieee.org/conferences_events/conferences/publishing/templates.html
- The length of your report should be 4 to 6 pages long, excluding the references. Resize all images properly in line with the text of your report.
- Submit your report in one PDF file through D2L (multiple submission is allowed, but only the last submission will be kept and evaluated).
- Upload all your source code to Google Drive or GitHub and share the link in the Abstract of your report.
- You may use any programming languages, software platforms, and packages for your project. You may directly use the source code shared by the authors or other researchers, but you should give proper references and identify the source in your report.
- If you choose group work, every member should be actively involved and make reasonable contributions to the project. Each group only needs to submit one report, but you should identify the role and contributions of each member in the project at the end of the Conclusion section.
- Complete the report in your own words. We will use Turnitin® for similarity check.

General Structure of Your Report

- Title, author(s), author(s) affiliation
- Abstract: A summary of your report and the main results (add a link to your source code at the end of the Abstract).
- Introduction: Introduce the problem you want to solve and why it is important. Review previous work with proper citations. Briefly describe your method and the main contributions of this work.
- Technical part: Detailed description of your method, algorithms, or models. You can use figures or other means to help your explanation.
- Experiments: Present your data and experimental details, results, as well as performance analysis and comparisons with other approaches. Include the parameter settings where applicable. You may show the results using tables, plots, graphs, etc.
- Conclusion: The main conclusion of your project (identify the role and contributions of each member in the project)
- References: All references cited in your report

Evaluation Principle

- Ensure that your approach, experimental methodology, and analysis are clearly articulated in your report. Include all essential components in your documentation.
- Maintain strict adherence to academic integrity; avoid plagiarism, and provide proper citations for all references, including data sources and source code.
- If your project contains novel contributions, I am available to assist you in enhancing and preparing it for potential publication.
- Successful completion of your project and a well-structured report are imperative. The evaluation will encompass your comprehension of the problem, technical explanations, experimental findings, and the depth of your analysis.
- You may refer to the project rubric for additional guidance and details regarding the evaluation criteria.
- Below is a preliminary breakdown of the project grading criteria:

    - Abstract & introduction 4/20
    - Technical part 6/20
    - Experiments & analysis 6/20
    - Completeness 4/20