



Final Project Description and Rubric

The final project can be developed individually or in pairs. The individuals or pairs will be referred to as the “Team” from now on. The Team should choose an image analysis problem/topic of interest and try to solve it using image processing and/or deep learning methods similar or related to the ones described in class. The problem/topic of interest should represent a scientific challenge. Ideally, the problem/topic of the project will align with the research interests of the Team.

Project Report

Report Format

The project should be written using one of the template provided in the course GitHub page: <https://github.com/rmsouza01/deep-learning>. The report is limited to up to 5 pages of technical content, including figures and tables, with one additional sixth page that may contain only references.

Elements that need to be in the report:

The report should contain the following information:

- Detail the motivation and significance of the problem being approached.
- Include relevant references (well-cited, high-impact factor journals, etc.).
- Describe and discuss the final methodology employed by the team to solve the problem.
- Present and discuss the results achieved by the team.
- Discuss the strengths and limitations of the proposed methodology.

The final report should have the link to a GitHub repository with the code developed by the team during the project. The recommended sections’ structure of the project is:

- Abstract
- Introduction
- Related Work
- Materials and Methods
- Results and Discussion
- Conclusions
- References

The project report should be delivered by the deadline established in class. The reports are graded by team and not by team members.

Final Project Rubric

Each component of the final project (report and presentation) will be given a score between 0 and 100 and weighted accordingly to obtain the final grade.

	Bin A (85-100)	Bin B (70-84)	Bin C (55-69)	Bin D (0-54)
Formatting Rules	- The written document fully adheres to the	- The written document adheres to	- The written document adheres to	- The written document does not follow most or

(10 points)	<p>formatting rules (i.e., the Overleaf template).</p> <ul style="list-style-type: none"> - All references are formatted consistently across the document 	<p>most of the formatting rules</p> <ul style="list-style-type: none"> - Most references are formatted consistently across the document 	<p>some of the formatting rules</p> <ul style="list-style-type: none"> - Some references are formatted consistently across the document 	<p>any of the formatting rules</p> <ul style="list-style-type: none"> - Very few or no references are formatted properly across the document
Writing quality (25 points)	<ul style="list-style-type: none"> - Extensive details and relevant examples. - All information was accurate and delivered effectively. - Terminology made the ideas in the report clear. 	<ul style="list-style-type: none"> - Subject knowledge was evident. - Included details and examples to answer the essential question. - Used proper terminology and vocabulary. 	<ul style="list-style-type: none"> - Information related to the topic, but report needed more details and examples to fully support ideas. - Work showed little student interpretation. - Used the wrong terminology to describe the topic 	<ul style="list-style-type: none"> - Information did not include details or examples from reliable sources. - Information was not sufficient to make successful argument. - Used inappropriate terminology or vocabulary.
Methods (25 points)	<ul style="list-style-type: none"> - Proposes to use appropriate methods for the problem at hand - Proposes a sound experimental setup 	<ul style="list-style-type: none"> - Proposes to use methods that could be appropriate for the problem at hand - Proposes an experimental setup that seems correct 	<ul style="list-style-type: none"> - Proposes to use methods that do not seem to be appropriate for the problem at hand - Proposes an experimental setup that is not the most appropriate to assess the methods 	<ul style="list-style-type: none"> - Proposes to use methods that are not appropriate for the problem at hand - Proposes an experimental setup that is inconsistent
Results and Discussion (20 Points)	<ul style="list-style-type: none"> - The results are presented in a clear and effective manner - The discussion is detailed and covers the methods strengths and limitations 	<ul style="list-style-type: none"> - The results are presented mostly in a clear and effective manner - The discussion is reasonably detailed and covers most of the methods strengths and limitations 	<ul style="list-style-type: none"> - The results are presented somewhat in a clear and effective manner - The discussion is somewhat detailed and covers most of the methods strengths and limitations 	<ul style="list-style-type: none"> - The results are presented in a manner that is not clear nor effective manner - The discussion is shallow or inexistent and covers little or no strengths and limitations of the methods
Quality of Figures and Tables (10 points)	<ul style="list-style-type: none"> - The report makes use of tables and/or figures to clearly transmit ideas, concepts and results - The figures have outstanding quality 	<ul style="list-style-type: none"> - The report makes use of tables and/or figures to transmit ideas, concepts and results - The figures have good quality 	<ul style="list-style-type: none"> - The report makes use of tables and/or figures to transmit ideas, concepts and results, but these tables and/or figures can confuse the reader - The figures have low quality 	<ul style="list-style-type: none"> - The report does not make use of tables and/or figures



References (10 points)	<ul style="list-style-type: none">- All references are relevant to the work- At least 12 references	<ul style="list-style-type: none">- Most references are relevant to the work- At least 10 references	<ul style="list-style-type: none">- Some references are relevant to the work- At least 8 references	<ul style="list-style-type: none">- Very few or no references are relevant to the work- Less than 8 references
---------------------------	--	---	--	---