Assignment 9 Rubric

Rubrics:

• **Individual Work**: This is an individual assignment. Do not use any AI tools to answer these questions. Using AI-based tools to generate answers will result in a score of **0**. (You may use them as a *resource* only, not for writing solutions.)

• **Requirements for Each Question**:
For every question, you must provide:

1. **Code** that is well-structured, modular, readable, and follows a consistent style.
2. **Discussion** explaining what the code does and the approach you applied.
3. **Analysis** that briefly but insightfully covers:
    - The logic of the code.
    - Preprocessing decisions made and their rationale.
    - The effect of these decisions on the dataset.
    - Strengths, limitations, and possible improvements.

Missing any of these required items will result in a deduction of **2 points per missing item**.

• *Assignment Structure*:
The assignment contains **6 questions**, grouped into three sections:

- Read the data
- Perform necessary Image pre-processing techniques
- Perform Data Augmentation
- Build, train, and compile CNN and AlexNet
- Evaluate the models
- Discuss your thoughts about these models

• *Expectations per Question*:
Each question must include, except Question 5:

- Code
- A short discussion of what you did and why
- A brief analysis of your results and what you learned

• *Final Reflection*:
After **Question 6**, you must also provide a concluding paragraph describing:

- The key insights you gained from the project, and
- What you learned in general.

Section	Question(s)	Total Points
Question 1	Q1: Read the data and provide more details on data. Lack of coding or analysis results in -5pts for each question	10%
Question 2	Q2: Provide details on analysis (coding required for data pre-processing), and what do we need them. Lack of coding or analysis results in -5pts for each question	10%
Question 3	Q3: Explanation of the data augmentation and. Coding required. Analysis the results is required. Lack of coding or analysis results in -5pts for each question	20%
Question 4	Q4: Build, Train, and Compile the models. Use proper parameters and optimization. Discuss the architecture and provide details. Lack of coding or analysis results in -5pts for each question	30%
Question 5	Q5: Evaluate the Models, Lack of coding or analysis results in -5pts for each question	20%
Final Reflection	Key insights & overall learning from the project	5 %
Presentation & Organization	Code readability, structure, consistency, reproducibility	5 %
TOTAL		100 %