NEURAL NETWORK & DEEP LEARNING COURSE PROJECT

- ***Please write all your names in Arabic.***
- ***Please make sure that your students' IDs are correct.***
- ***Handwritten Signatures for the attendance of all team members should be filled in before the discussion.***
- ***Please attend the discussion on time (announced separately)***

Project Name**:** _____

Discussion Time : _____

Team Information: ***(typed, not handwritten, except for the attendance signature):***

	ID [Ordered by ID]	Full Name [In Arabic]	Attendance [Handwritten Signature]	Final Grade
1				
2				
3				
4				
5				
6				
7				

Grading Criteria:

		Grade	Notes
1. Data Preprocessing & Data Augmentation o *Proper preprocessing of the dataset (cleaning, resizing, normalization).* o *Correct handling of imbalanced data through augmentation (if applicable).* o *Demonstration that augmentation was applied effectively and justified.*	***5 points***		
2. Application of Models			
❖ ***VGG-19 (from scratch)*** o *Correct implementation of the architecture from scratch.* o *Successful training on the dataset.*	***3 points***		

❖ ***ResNet (transfer learning)*** ○ *Proper loading of the pre-trained model.* ○ *Correct application of transfer learning on the dataset.*	***3 points***		
❖ ***Inception V1 (transfer learning)*** ○ *Proper loading of the pre-trained model.* ○ *Correct application of transfer learning on the dataset.*	***3 points***		
❖ ***MobileNet or Vision Transformer (ViT)*** ○ *Correct implementation and/or transfer learning.* ○ *Successful training on the dataset.*	***3 points***		
3. Evaluation & Visualization of Models ❖ *Evaluation metrics for each model:* ○ *Accuracy* ○ *Recall, Precision, F-score* ○ *Confusion matrix visualization* ○ *ROC curve and AUC visualization*	***5 points***		
4. Documentation			
❖ ***Documentation of Architectures*** ○ *Clear explanation of the four selected architectures with step-by-step details.* ○ *Inclusion of diagrams/graphs illustrating each architecture.* ○ *Proper referencing of the original research papers that introduced these architectures.*	***3 points***		
❖ ***Comparative Analysis of Models*** ○ Comparison of the four models based on their experimental results. ○ Highlighting the pros and cons of each architecture. ○ Explanation of why a specific architecture performs better for your given task and dataset.	***3 points***		
5. GitHub Upload *for the whole project code with well-organized structure, ensuring that the* ***repository is publicly accessible****.*	***2 points***		

Teaching-Assistant's Signature: _____

_____

30