3/29/25, 12:35 PM Assignment 2

Assignment 2

Start Assignment

- Due Wednesday by 5:59am
- Points 15
- Submitting a file upload

Assignment 2.pdf (https://canvas.cmu.edu/courses/46907/files/12617743?wrap=1) (https://canvas.cmu.edu/courses/46907/files/12617743/download?download_frd=1)

Criteria	Ratings	Pts
Panel of Plots		
Create a well-formatted panel of plots (1pt) showing 1 random example of each image class (1pt)		2 pts
Histograms of Grayscale Values		
Select 2 classes and 10 random images from each (1 pt), create a histogram for each class (1 pt) and compare and analyze differences between histograms (1 pt)		3 pts
Neural Network Training		
Define and train a neural network (1 pt); Describe architecture (layers, activations, loss, optimizer) (1 pt); Compute learnable parameters manually and compare with model.summary() (1 pt)		3 pts
Model Performance Plot		
Plot loss and accuracy over training epochs (1 pt), Recommend an appropriate number of epochs (0.5 pt), Discuss signs of overfitting (1.5 pt)		3 pts
Final Report		
Present a clean, well-formatted report and include key code snippets and interpretations.		2 pts
Semester Project Proposal		
Describe the AI task and research question and mention potential datasets		2 pts

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