**Day 4 Assignment Submission Template**

**1. Dataset Details**

* Name of the dataset:
* Source (e.g., Kaggle, UCI, etc.):
* Type of dataset (e.g., image, text, tabular):
* Link to the dataset:

**2. Problem Statement**

* Clearly state the problem you are solving (e.g., "Classify images of animals into 5 categories").
* Why is this problem important or interesting?

**3. Preprocessing**

* Describe the preprocessing steps performed:
  + Missing value handling.
  + Feature scaling/normalization.
  + Splitting into train/test/validation sets.
* Include code snippets if necessary.

**4. Model Architecture**

* Describe the architecture of your model:
  + Number of layers, neurons per layer.
  + Activation functions used.
  + Optimization algorithm and loss function.

**5. Training**

* Number of epochs and batch size used.
* Summarize the training process with loss/accuracy trends.

**6. Evaluation**

* Metrics used (e.g., accuracy, precision, recall).
* Results on the test set.
* If applicable, provide confusion matrices or other visualizations.

**7. Visualization**

* Include:
  + Loss/accuracy curves.
  + Sample predictions with actual vs. predicted labels.
  + Any other relevant plots.

**8. Challenges Faced**

* Mention any difficulties you encountered and how you overcame them.

**9. Conclusion**

* Summarize your findings.
* How could the model be improved in the future?

**10. Code**

* Provide the complete code