Model Development Phase Template

Date	5 November 2024
Team ID	SWTID1726832093
Project Title	Analysis of Amazon Cell Phone Reviews Using NLP Technique
Maximum Marks	5 Marks

Model Selection Report

In the model selection report for future deep learning and computer vision projects, various architectures, such as CNNs or RNNs, will be evaluated. Factors such as performance, complexity, and computational requirements will be considered to determine the most suitable model for the task at hand.

Model Selection Report:

Model	Description

- **Model Type**: Sequential
- **Layers**:
    - **Embedding Layer**:
        - Input dimension: 10,000 (the vocabulary size)
        - Output dimension: 128 (the size of the embedding vectors)
        - Input length: 100 (the maximum length of input sequences)
    - **LSTM Layer**:
        - 100 units (the dimensionality of the output space)
    - **Dense Layer**:
        - 1 unit (for binary classification, outputting a probability)
        - Activation function: sigmoid

Model 1

Considerations for Choosing Architecture

When selecting an architecture for a deep learning project, especially for tasks like sentiment analysis, consider the following:

- **Data Type**: Sequential data (like text) benefits from architectures that can handle context, such as LSTMs, GRUs, or Transformers.
- **Model Complexity**: LSTMs are generally more complex than simpler models (like logistic regression or basic feedforward networks), so ensure that the complexity is justified by the size and nature of your dataset.
- **Performance Requirements**: Depending on your computational resources and the speed requirements of your application, you might consider lighter architectures or techniques like model distillation.
