Model Development Phase Template

Date	15 October 2024
Team ID	740663
Project Title	Predicting Diamond Prices With ANN Using Deep Learning
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
Keras	A Keras model for predicting diamond prices uses supervised learning to estimate the value of diamonds based on features like carat weight, cut, color, clarity, depth, and table size. The model typically consists of a fully connected neural network with layers of dense neurons and activation functions like ReLU, while the output layer uses a linear activation function for regression. Input features are preprocessed, with numeric data normalized and categorical attributes encoded. The model is trained using a loss function like Mean Squared Error (MSE) and

	optimized with algorithms such as Adam. Evaluation metrics like RMSE and R² score are used to assess its performance. Once trained on historical data, the model predicts prices accurately, assisting in diamond valuation.	