**Loan Application Prediction Workflow**

**Library Imports**

Loads necessary libraries such as caret, e1071, and rpart.

**Data Preparation**

* Assumes that the data is stored in a dataframe named credit\_risk\_dataset.
* Converts the loan\_status variable to a factor if it’s not already.
* Splits the data into training and testing sets using a 70-30 split.

**Data Preprocessing**

* Imputes missing values in both training and testing data using median imputation.

**Model Training**

Trains three different models:

* **Linear Regression** (glm method in caret package).
* **Decision Tree** (rpart method in caret package).
* **Support Vector Machine (SVM)** (svm function in e1071 package).

**Model Evaluation**

* Predicts on the test data using each trained model.
* Evaluates the performance of each model using confusion matrices.

**Print Classification Reports**

Prints classification reports for each model.

**K-Means Clustering**

* Assumes that k-means clustering was already performed in a previous code snippet.
* Prints the cluster centers.

**Predicting on New Data**

* Creates a new record as a dataframe named new\_record without the loan\_status variable.
* Imputes missing values in the new record using the same preprocessing object.
* Predicts the loan status of the new record using the trained models.
* Prints the predicted loan status for the new record using each model.