**Generative AI Consortium**

Assignment – 2

Predicting Stock Price Movements in the Stock Market

Data Exploration & Preprocessing:

* All the required libraries are imported
* The dataset is loaded using the Pandas library and explored
* The dataset is checked for any missing values.
* Categorical values are converted into numerical values using the technique One Hot Encoding

Feature Engineering:

* Classify the dataset into dependent and independent variables
* Feature Scaling is done using the Standard Scaler to standardize continuous variables

Model Building:

* Split the dataset into train and test dataset in the ratio of 80:20
* The model is trained using Random Forest Regressor
* The suitable Hyperparameter tuning technique is used to tune the model.

Model Evaluation:

* The accuracy of the model is calculated using the accuracy\_score() and the confusion matrix is generated using the confusion\_matrix()

Conclusion:

* A predictive model to predict the stock price movement was developed using a Random Forest Regressor model



