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Section: BSAI-4A	
Subject: Programming for Artificial Intelligence	
Lab Task: 2	

Task2: Titanic Spaceship Prediction

Libraries Used:

- pandas for handling tabular data.
- numpy for numerical data.
- accuracy_score for measuring classification accuracy.
- mean_absolute_error for evaluating model errors.
- LabelEncoder for encoding categorical variables.
- RandomForestClassifier for building a classification model.

Dropped Values:

First of all, we have dropped all the unnecessary columns that we do not need or have no effect on pricing.

The Columns Include:

- Id
- Cabin
- Name
- Age
- Room Service
- Food Court
- Shopping Mall
- VR Deck
- Spa

Filling Values:

Filled Null Values By mode()

- Home planet
- CryoSleep
- Destination
- VIP

Label Encoding:

Because the model works with numbers, not text, we use label encoding to convert categorical values to numeric.

Train, Test, Split:

- 80 percent of the data is used for training.
- 20 percent is used for testing.

Model:

- Used Linear Random Forest Regressor.
- Trained it using X and target
- Tested the data and saved the predictions.

Final Submission:

Submitted the results in the required format on Kaggle.

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