



Diamonds prices Dataset:

It is important that credit card companies are able to recognize fraudulent credit card transactions so that customers are not charged for items that they did not purchase.

Content

price in US dollars (\\$326--\\$18,823)

carat weight of the diamond (0.2--5.01)

cut quality of the cut (Fair, Good, Very Good, Premium, Ideal)

colour diamond colour, from J (worst) to D (best)

clarity a measurement of how clear the diamond is (I1 (worst), SI2, SI1, VS2, VS1, VVS2, VVS1, IF (best))

x length in mm (0--10.74)

y width in mm (0--58.9)

z depth in mm (0--31.8)

depth total depth percentage = $z / \text{mean}(x, y) = 2 * z / (x + y)$ (43--79)

table width of top of diamond relative to widest point (43--95)

Inspiration

Identify fraudulent credit card transactions.

Steps to Perform the Model:

1. Load the dataset
2. Preprocessing.
 - a) Print the first 5 rows of the dataset
 - b) Check the features in the dataset
 - c) Check the missing values
 - d) Check the numerical features in the dataset
 - e) Check the distribution of categorical columns
3. Separate features and Labels
4. Split the dataset to train and test
5. Do normalisation if required
6. Model Building (ANN)
7. Compile the model
8. Make predictions
9. Find Accuracy score
10. Build the ANN models with increasing 2 dense layers to each model and compare the accuracy scores (Minimum 5 models Required)
11. Visualize train and validation Accuracy and Losses for every model.



Note: For any doubt's clarifications, Join the mentor session from 2:00 pm to 6:00 pm or reach us on Discord 10:00 AM to 5:00 PM.

Thanks, and Regards,
Innomatics.