**ATM cash demand forecast using Dataset:**

ATM\_Transaction-data\_analysis-

**Content**

It is quite obvious that daily cash withdrawal amounts are time series. Therefore, in this typical cash demand forecast model we will present time series and regression machine learning models to troubleshoot the above use case. We will work on the demand for a single ATM (a group of ATMs can also be worked on that is treated as a single ATM) to develop a model for the given data set. We have to remember that cash withdrawals from an ATM are not only time dependent. There could be seasonality, e.g.

people will have a tendency to withdraw money on Friday for the weekend or

end of the month when people get their salaries or

between 7–10th days of each month some people get their pension. Therefore, developing a cash demand forecasting model for an ATM network is a challenging task. Also, the chronological cash demand for every ATM fluctuates with time and is often superimposed with non-stationary behaviour of users.

**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 MSE, MAE, RMSE, R2 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 mentoring session!

**Thanks, and Regards,**

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