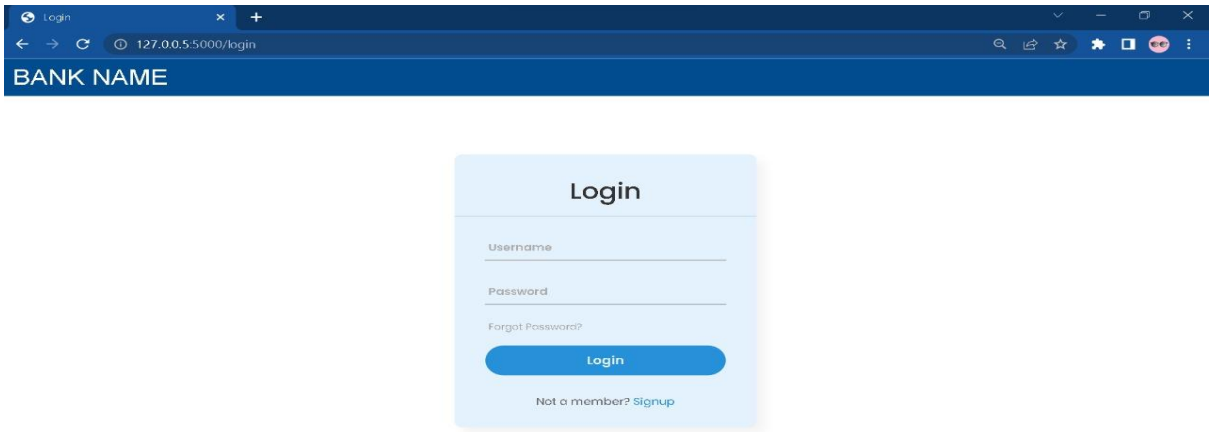
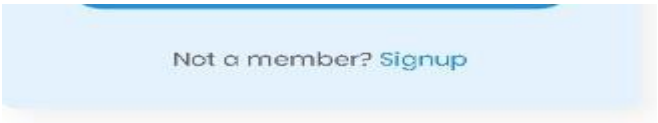
1.Login

A-LAP users must first log in to the application by entering their username and password before pressing the login button.



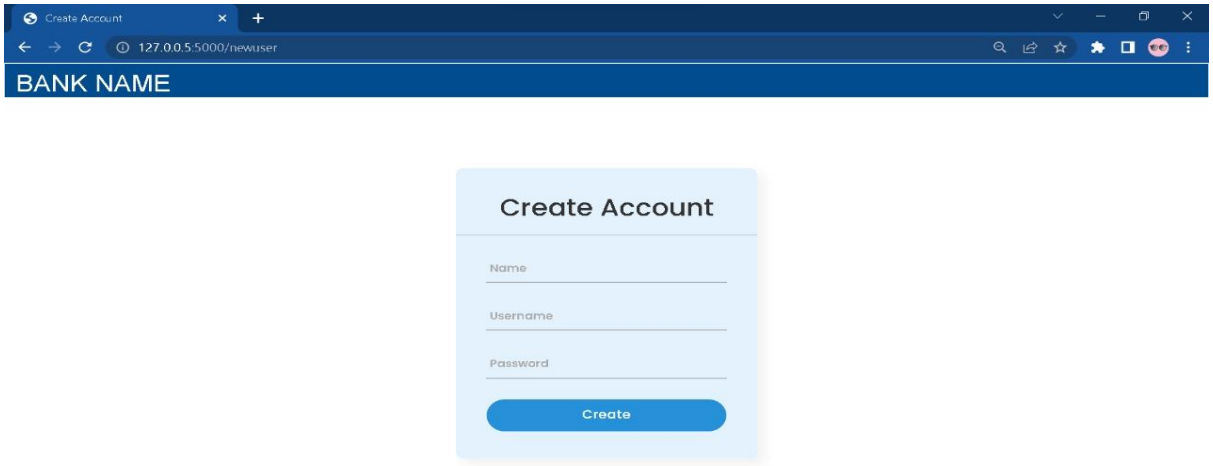
If you are a new user, click sign up, and you will be redirected to the New User Page.



2.Sign-Up

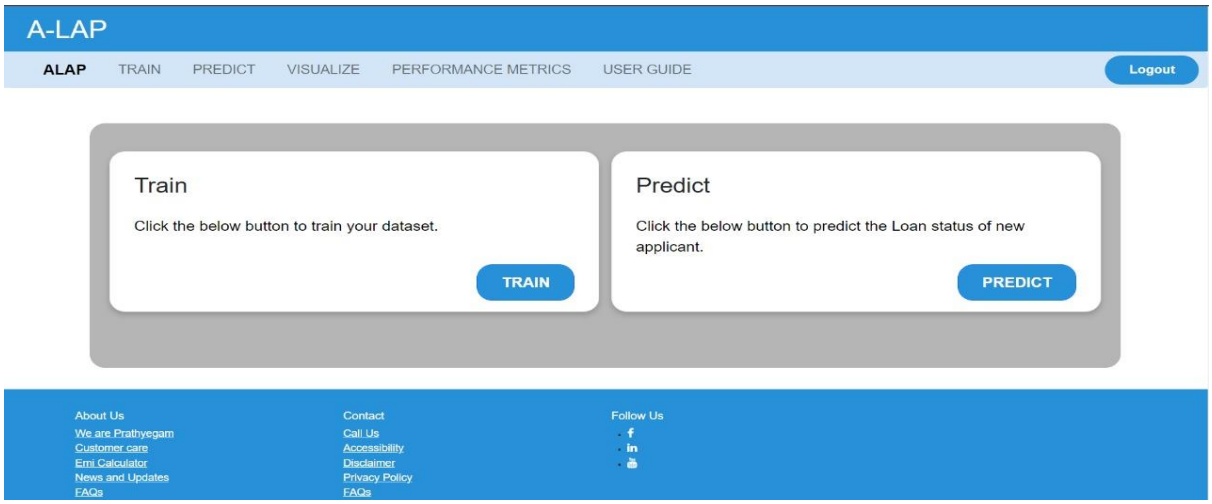
After providing their name, preferred username and password, users are asked to click "create."

After clicking create users will be redirected to Login Page, where user can Login using their credentials and they can start to use A-LAP



3.User Dashboard

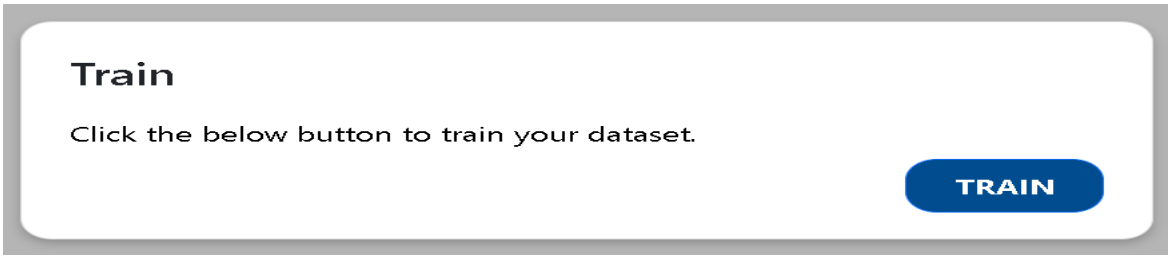
After logging in, the user's dashboard is shown to the user, giving them access to a variety of options.



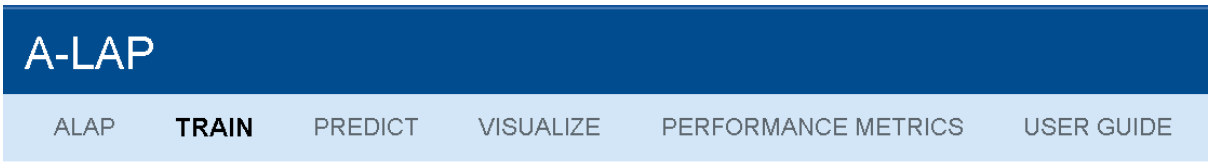
4.Train

When a user wants to create a new loan type, they can click on train. User can access train button in two ways

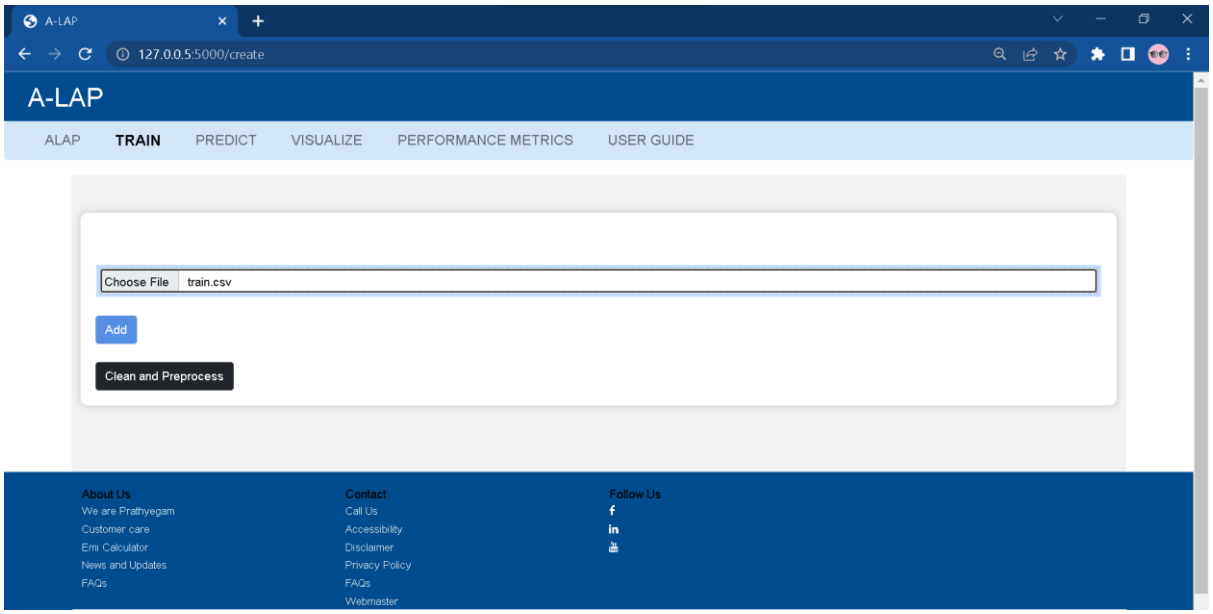
i.One way is by clicking the train button in the card



ii. Users can also access Train button by clicking on Train in navigation bar.

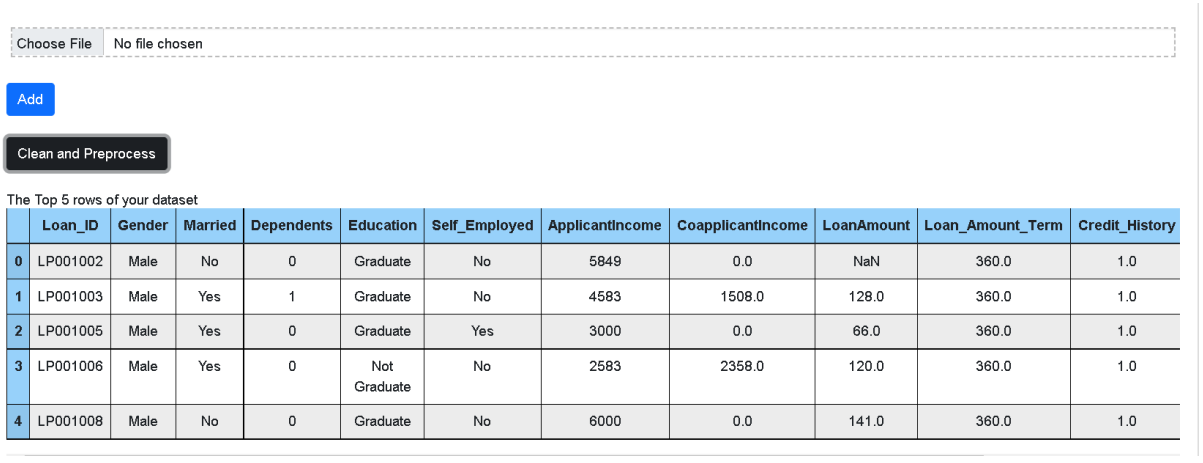


The user will be directed to the preprocessing page after clicking the train button.



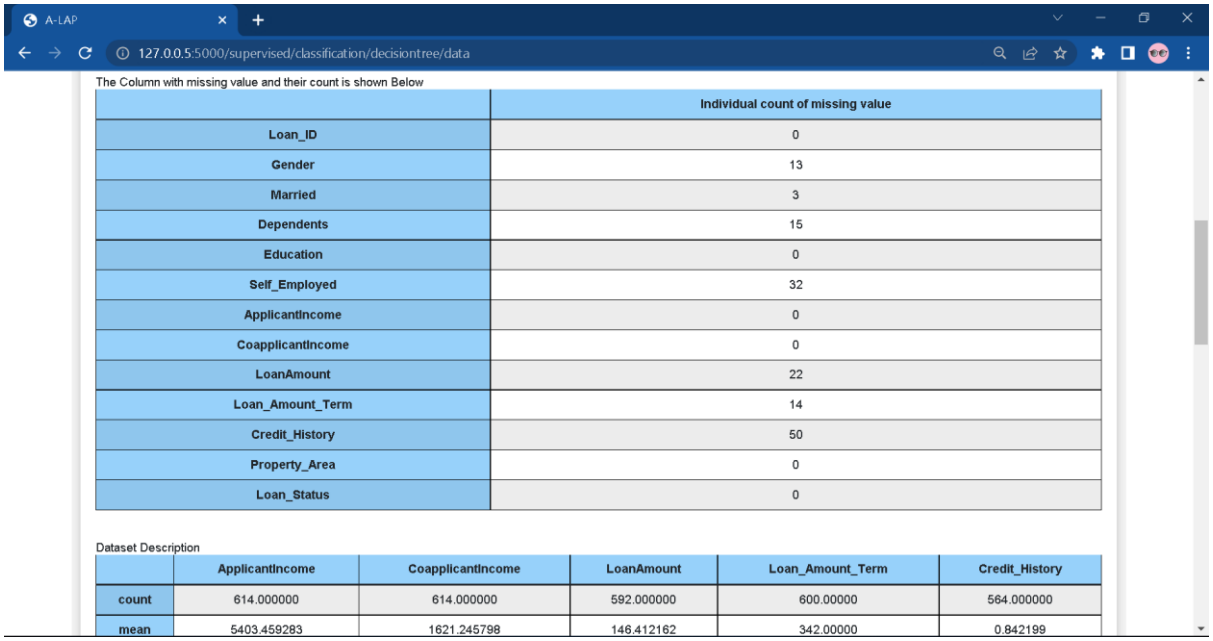
i.To start with preprocessing the user have to load their csv file by clicking Choose file button.

ii. After choosing the file the user have to load the dataset to the product by clicking on add button and then click on clean and preprocess , then the user can see a sample of their uploaded dataset.



	Loan_ID	Gender	Married	Dependents	Education	Self_Employed	ApplicantIncome	CoapplicantIncome	LoanAmount	Loan_Amount_Term	Credit_History
0	LP001002	Male	No	0	Graduate	No	5849	0.0	NaN	360.0	1.0
1	LP001003	Male	Yes	1	Graduate	No	4583	1508.0	128.0	360.0	1.0
2	LP001005	Male	Yes	0	Graduate	Yes	3000	0.0	66.0	360.0	1.0
3	LP001006	Male	Yes	0	Not Graduate	No	2583	2358.0	120.0	360.0	1.0
4	LP001008	Male	No	0	Graduate	No	6000	0.0	141.0	360.0	1.0

iii.Scrolling down ,the user can see the count of the missing value for the respective columns in the dataset which is depicted in a table, and following this the average and mean of the every feature is displayed in a table



iv.Now to preprocess the data according to the user needs the user have to do the following steps:

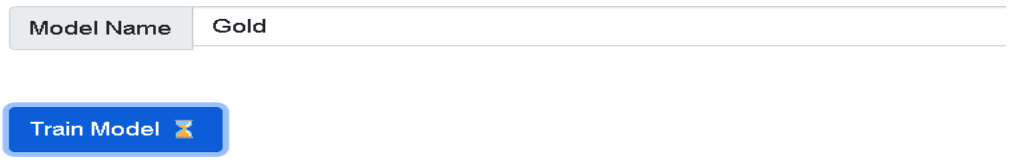
i. The user can choose the features from the table that are necessary for loan prediction, and they can add the feature by simply toggling the option, and the user are advised not to select the label feature and the row numbering column in this.

ii. After selecting the required features now users have to select label feature, label feature in the dataset is the column which shows the result of the given instance for example loan status is an example for label which says whether the loan is approved for the given user or not.

iii. Now select the features which are needed to be encoded, generally it is advised to select the columns which have string values in them like gender, Marital Status.

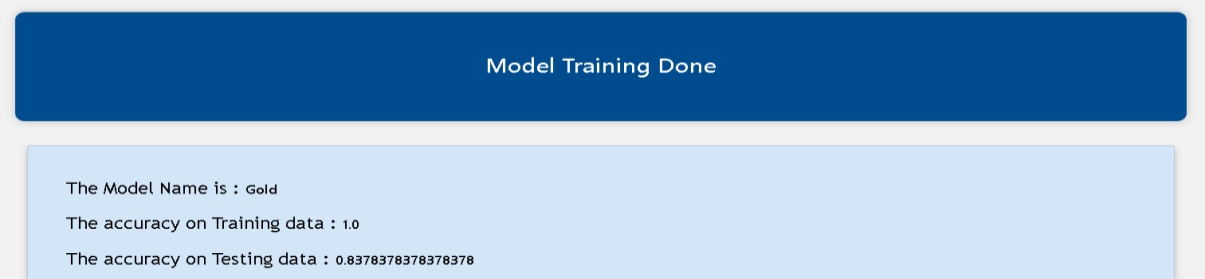
iv.Now, users can name their models by giving them appropriate names, such as "gold" or "personal." The name of the model should represent the type of loan.

v. After giving the model name now click Train Model button , it will take sometime to redirect you to the performance metrics page and waiting varies according to the training data size and Server's computation power.

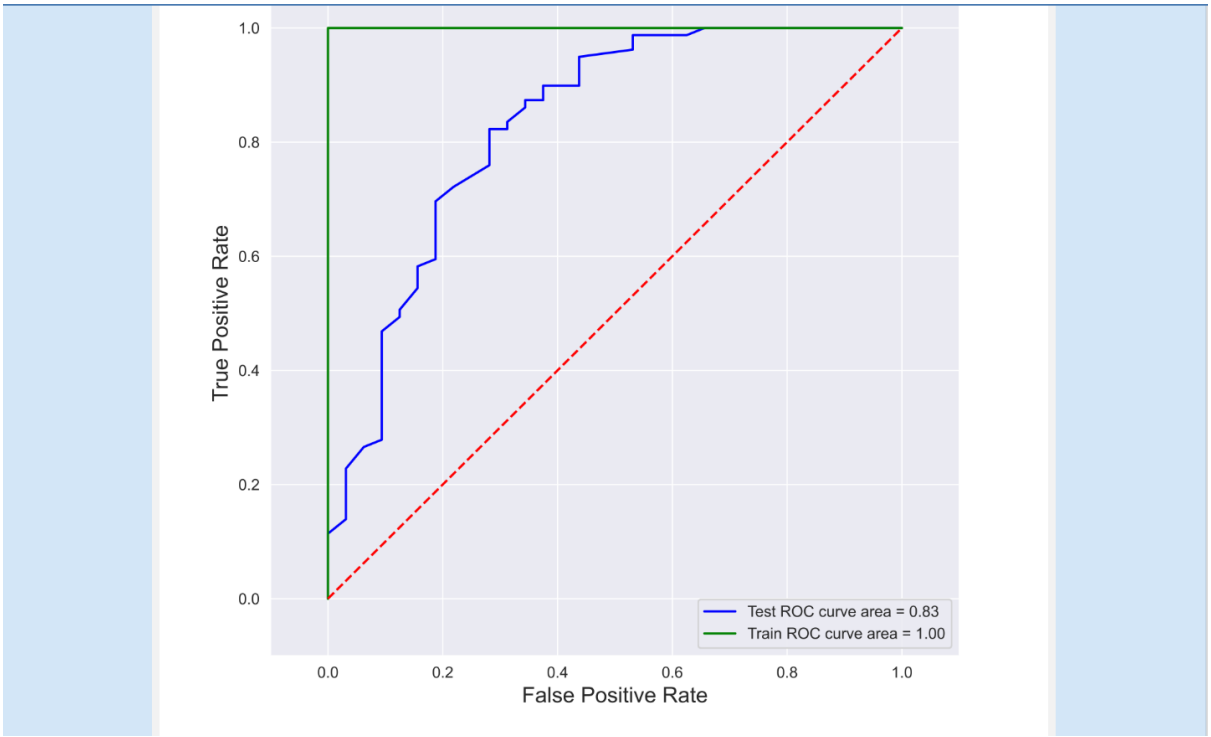


Now users are directed to the performance metrics page where user can see

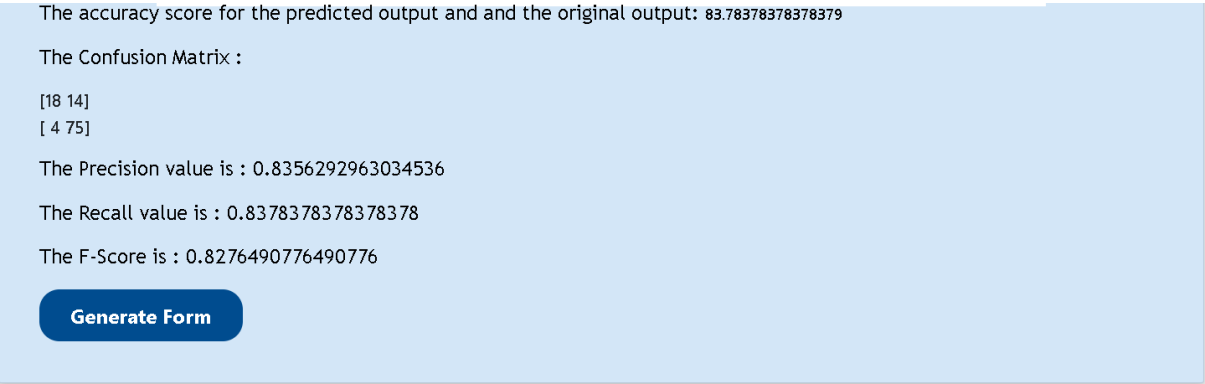
i.The accuracy of training data.



ii.Visualization for performance of given data.

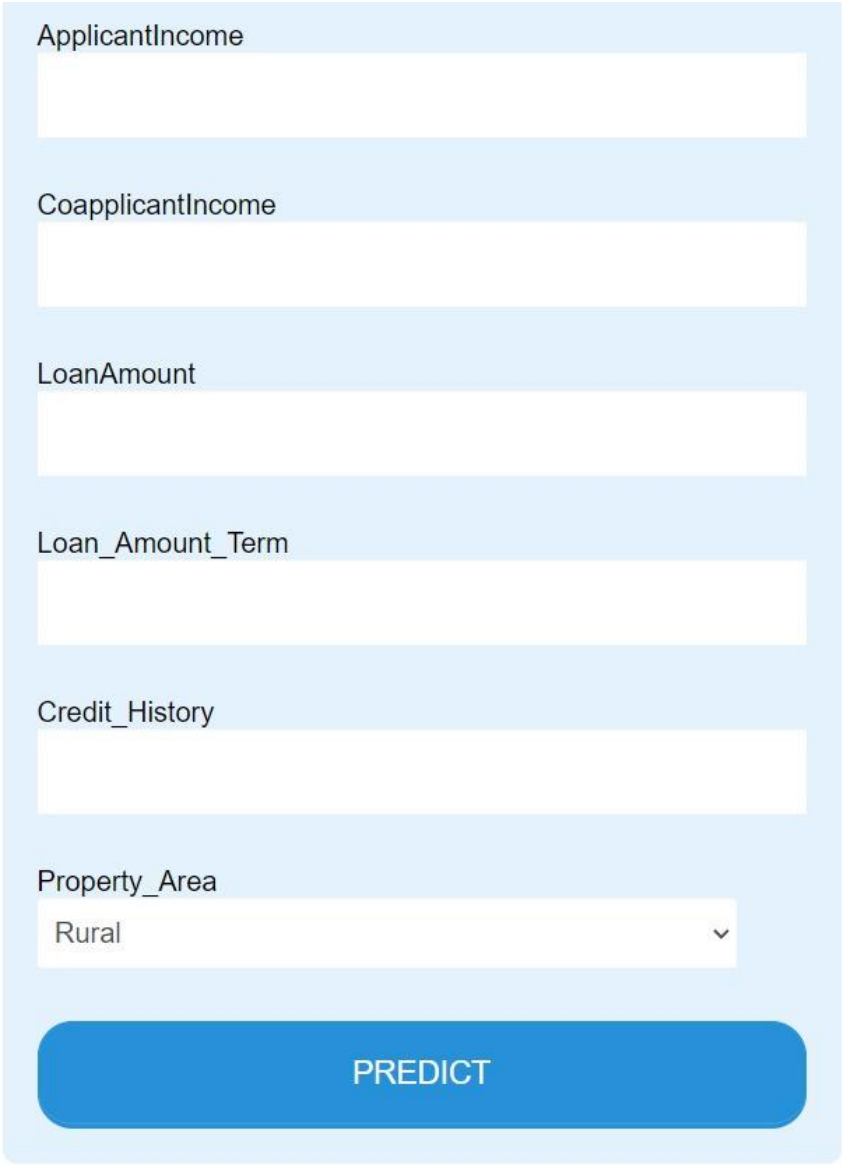


iii.The other performance metrics like confusion matrix, precision values are displayed.



The user may understand how their dataset performs in the algorithm by keeping an eye on all of these. Now click Generate Form button

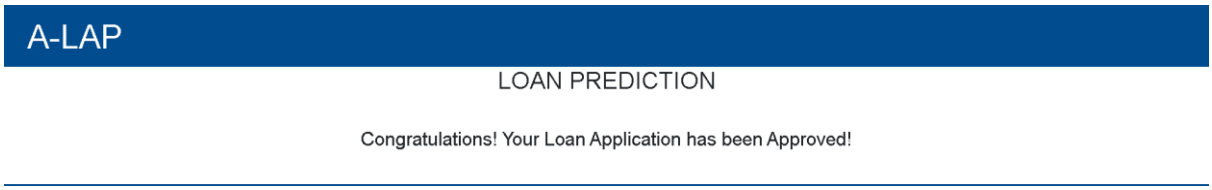
By clicking Generate Form the model generates customized form according to the user needs.



The user must now fill out the form with the necessary information before they can click the predict button.

Now the predict button redirects the user to result page where the user can see the result for the users input.

If the loan is approved:

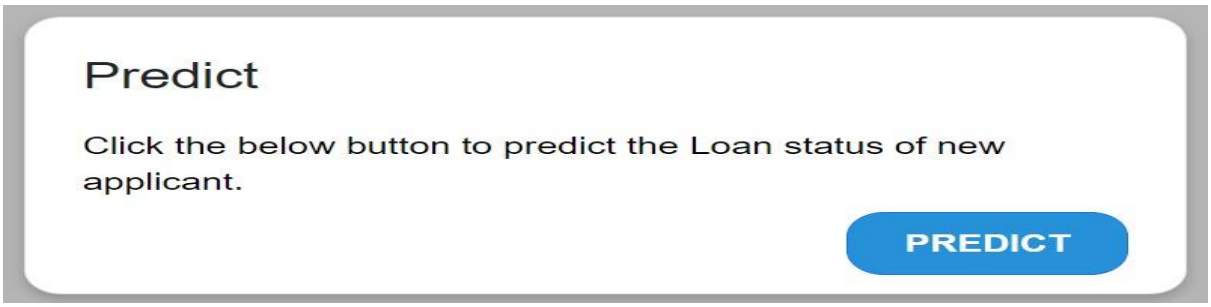


If the loan is not approved the user can generate the eligible amount by clicking “Generate Suggested Loan Amount”:

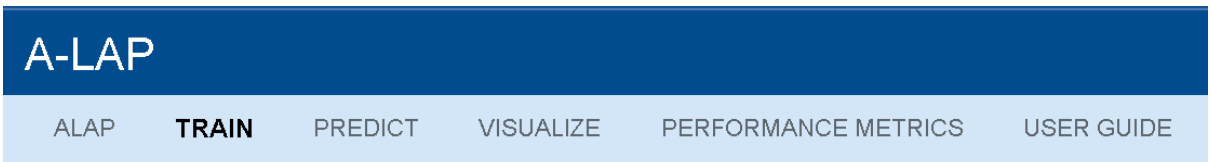
5.Predict

When a user wants to approve a new loan, they can click on Predict. User can access Predict button in two ways

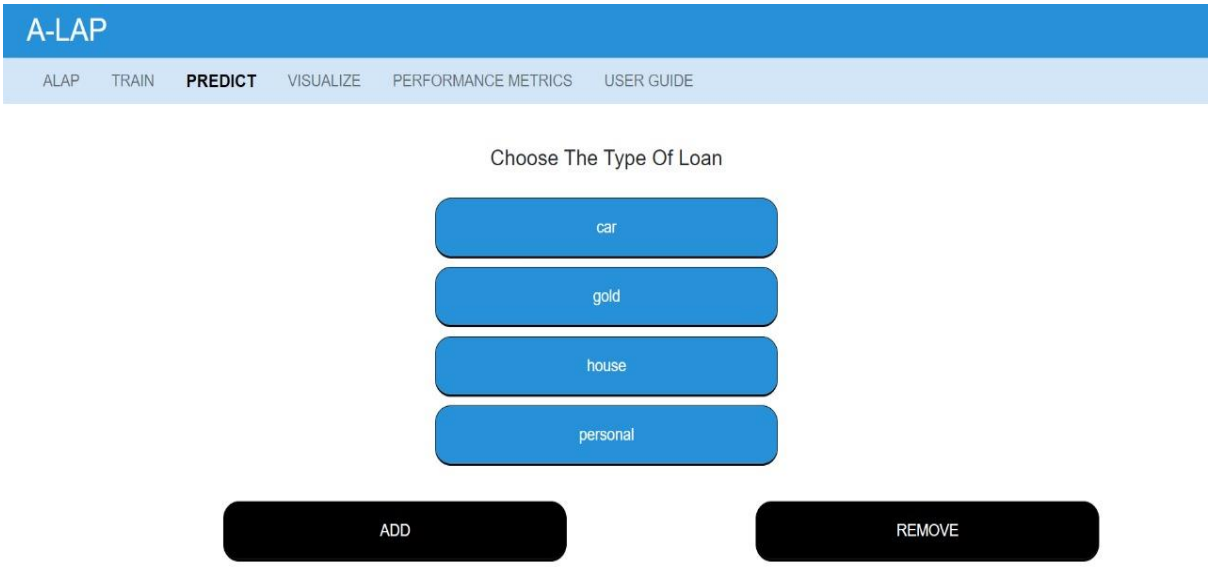
i.One way is by clicking the predict button in the card.



ii. Users can also access Train button by clicking on Train in navigation bar.

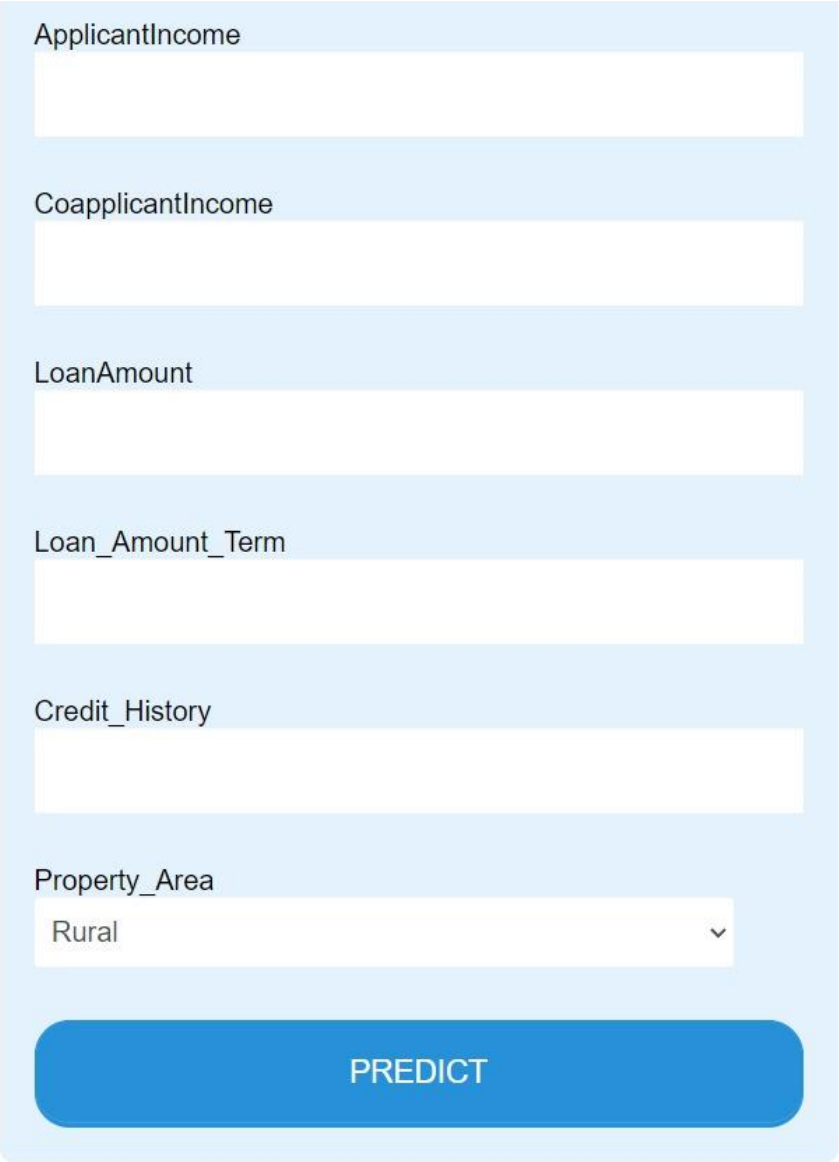


After clicking the predict button the users are redirected to the Type of Loan page.



i.The user can select the type of loan which they want to predict from the given list

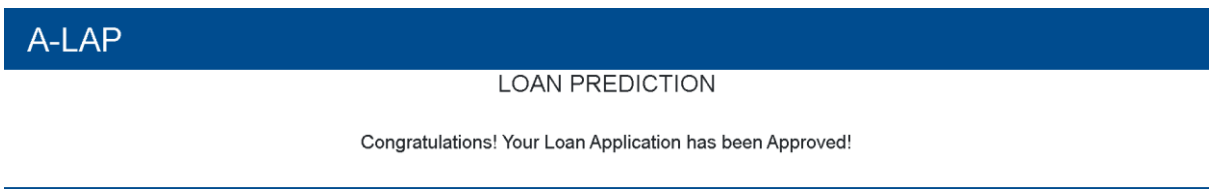
After clicking on the loan the user are redirected to the corresponding loan form pages



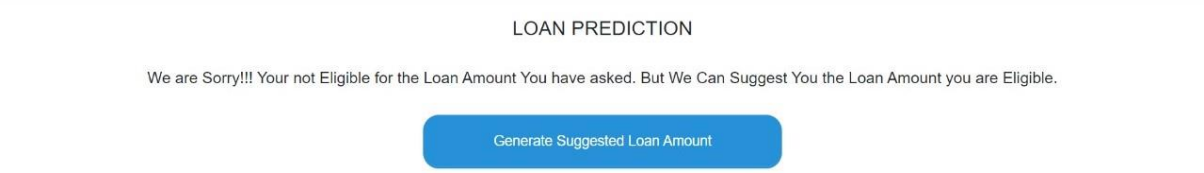
The user must now fill out the form with the necessary information before they can click the predict button.

Now the predict button redirects the user to result page where the user can see the result for the users input.

If the loan is approved the page shows the below output:

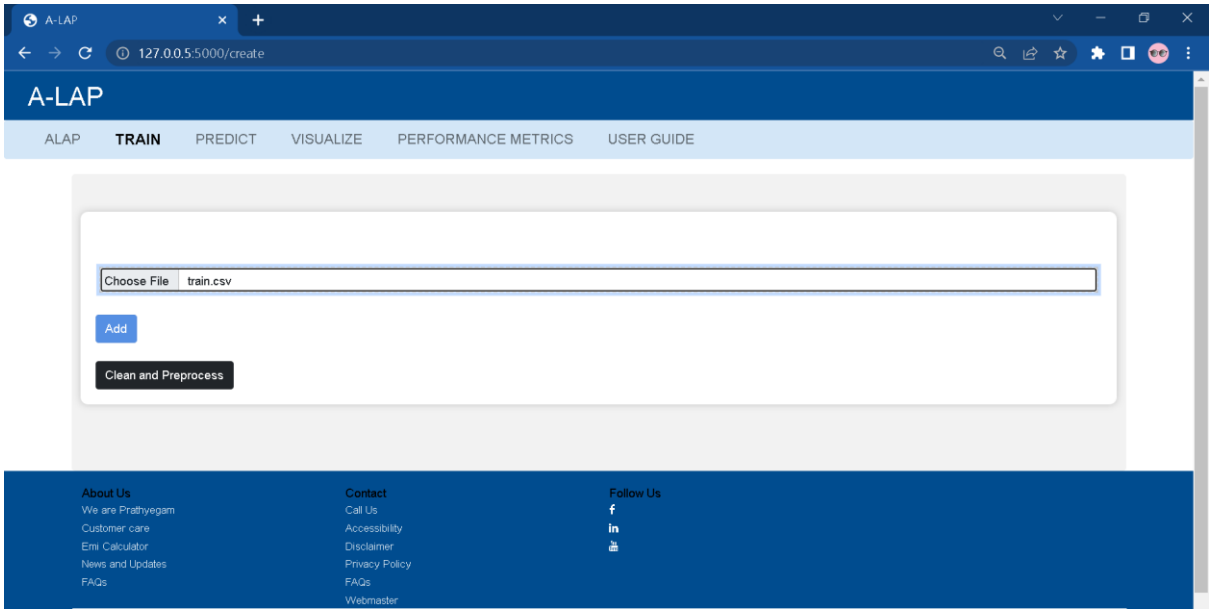


If the loan is not approved the user can generate the eligible amount by clicking “Generate Suggested Loan Amount”:

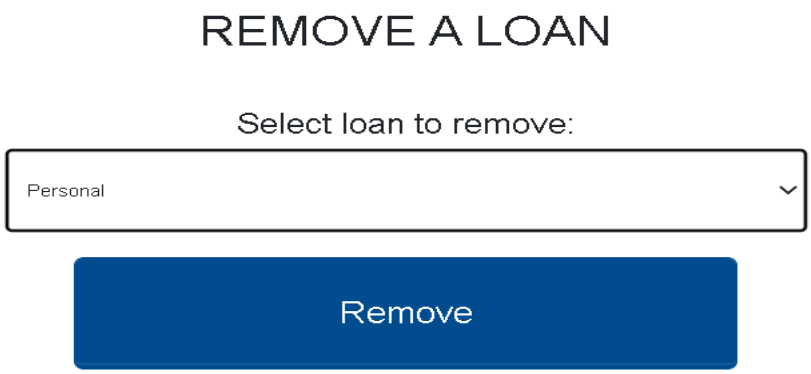


ii. If a user wants to add a new loan type, they must click the “Add” button, which redirects them to the training page.

Train Page



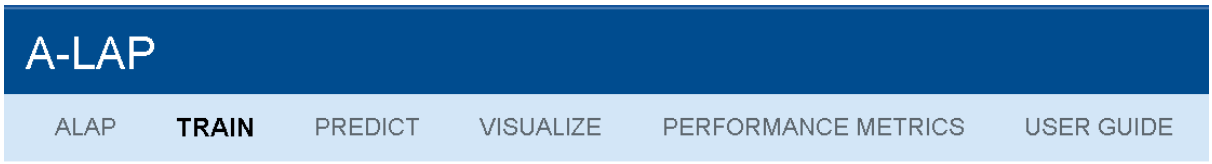
iii. If a user want to remove a loan type then the user can click “Remove” button which redirects user to remove loan page:



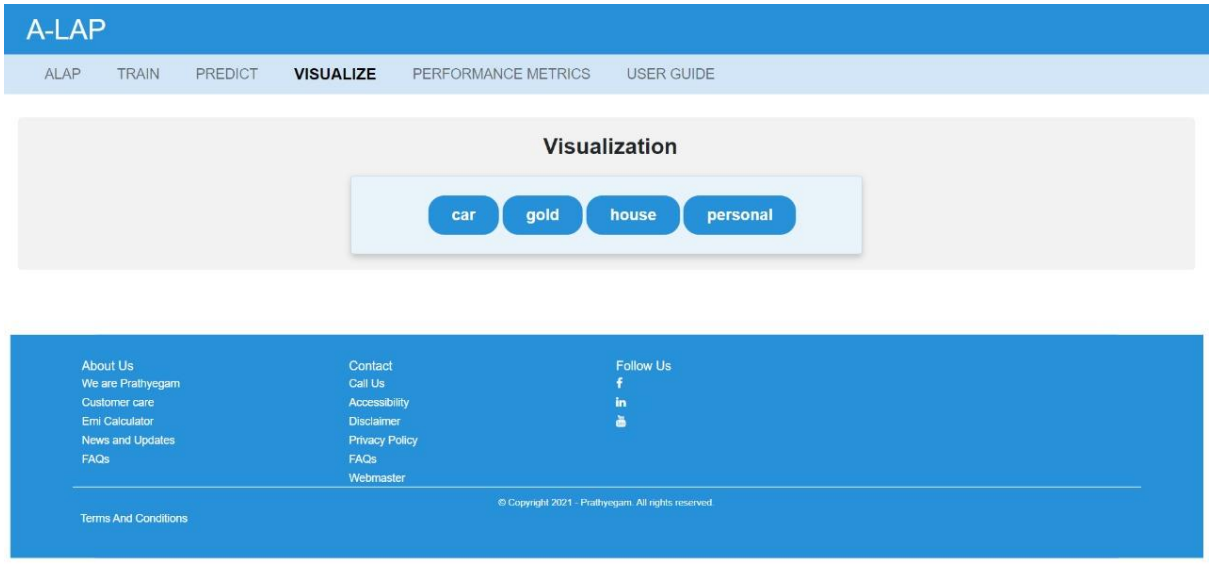
Now the user can select the loan from the dropdown and can click remove button to remove the loan type.

6.Visualize:

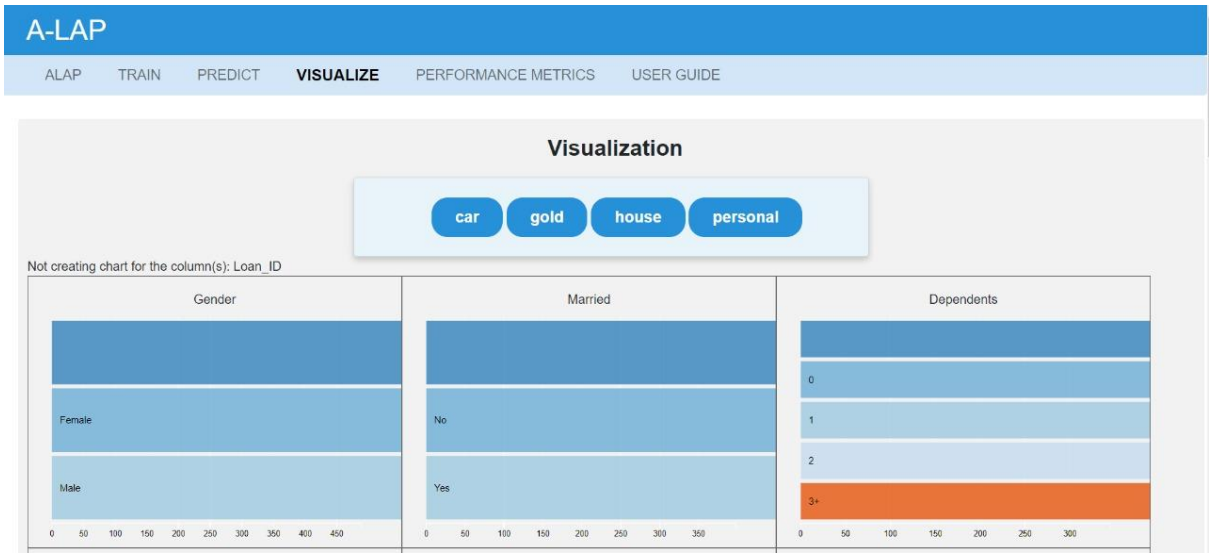
Users can access Visualize option by clicking on Visualize option in navigation bar



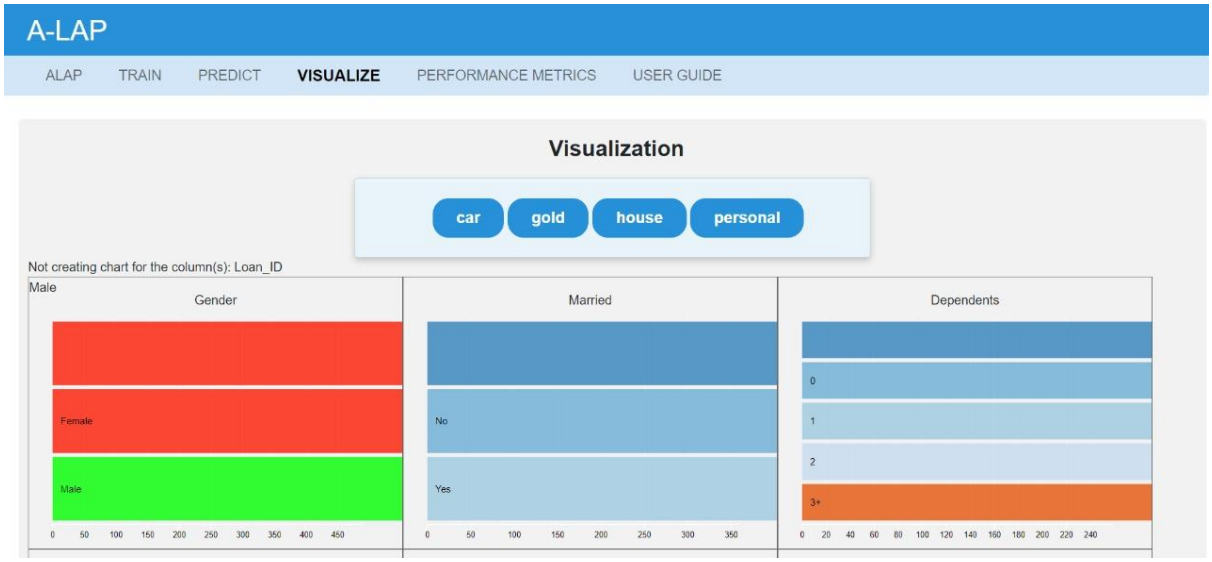
Visualize button redirects user to the Visualize page where the user can choose the type of loan which they want to visualize:



User can choose the type of loan by clicking on the loan name. The corresponding loan's dataset is visualized:



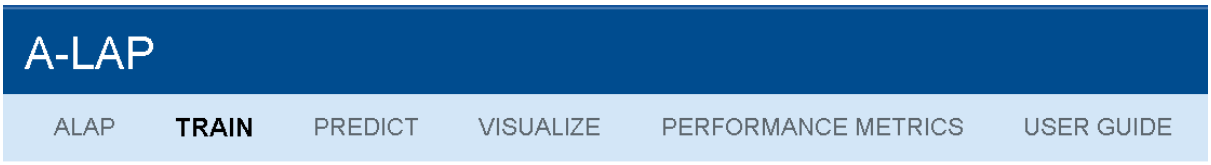
Now user can also select an attribute from any bar graph and can see the other changing according to it.



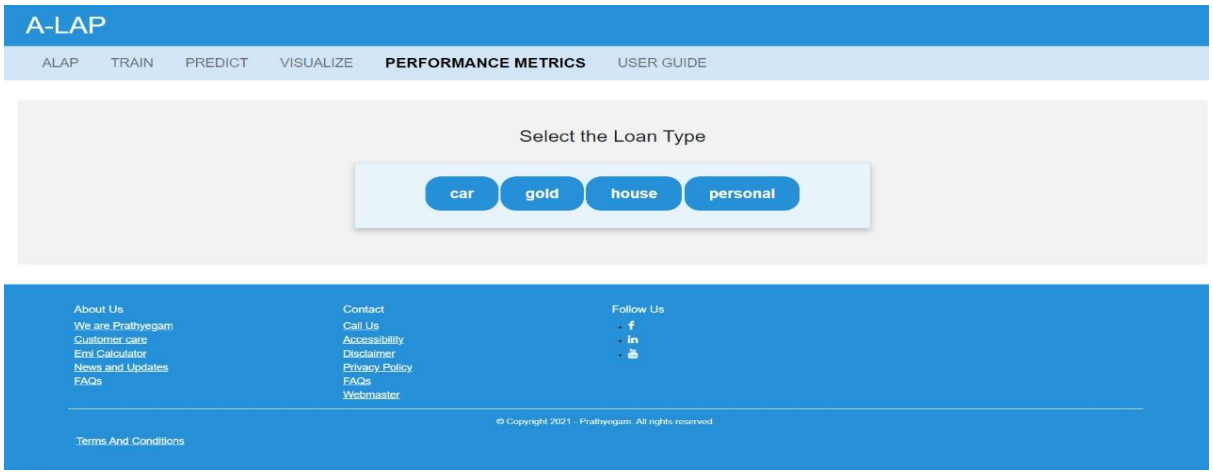
In the above example male is chosen and the corresponding graphs are changed according to it.

7. Performance Metrics:

Users can access Performance metric option by clicking on Performance Metric option in navigation bar:

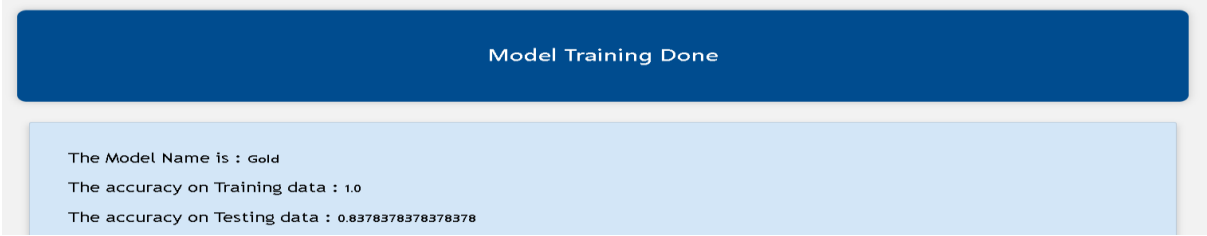


The Performance Metrics button takes the user to a page where they may select the type of loan for which they want to view performance metrics:

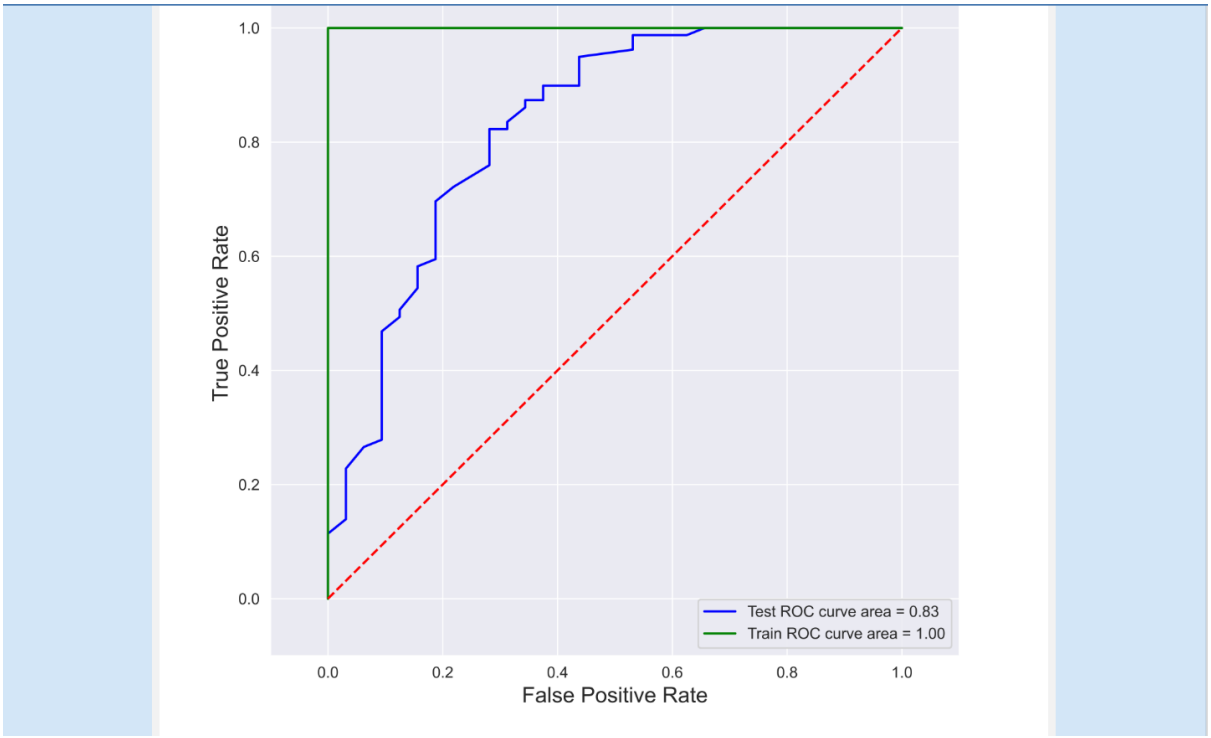


After selecting the type of loan the user is redirected to performance metric page of that particular loan where user can see

i.The accuracy of training data.



ii.Visualization for performance of given data.



iii.The other performance metrics like confusion matrix, precision values are displayed.

The accuracy score for the predicted output and and the original output: 83.78378378378379

The Confusion Matrix :

[18 14]
[4 75]

The Precision value is : 0.8356292963034536

The Recall value is : 0.8378378378378378

The F-Score is : 0.8276490776490776

Generate Form