

User Guide for Application

The web application will consist of three pages. The main page will be the page where eligibility predictions occur.

The screenshot displays a web application titled "LangaSat Service Eligibility Predictor". It features a navigation bar with four links: "Customer Details", "Model Accuracy Metrics", and "Development Team". The main content area is divided into two sections. On the left, the "Customer Details" section contains a form with the following fields: "Title" (text input), "Date Of Birth" (text input with "2024" entered), "Department" (text input), "Marital Status" (dropdown menu with "Single" selected), "Annual Salary" (text input with "0" entered), "Country ID" (text input with "Country ID" entered), "Gross Pay Last Paycheck" (text input with "0" entered), "Education" (dropdown menu with "Bachelor's Degree" selected), "Gross Year To Date" (text input with "0" entered), "Occupation" (dropdown menu with "Cleric" selected), "Gross FRS Contribution" (text input with "0" entered), "Household Size" (text input with "0" entered), and "Years In Residence" (text input with "0" entered). A "Submit" button is located at the bottom of this form. On the right, the "Customer Eligibility" section is currently empty.

Figure 1 Web Application Predictor

The main page, called Customer Details, will take the customer details as input. The user will need to enter the values for all the empty cells. After they have entered all the details, they will be able to submit them. After they have submitted, the model will be used to make a prediction, and the classification of the user will be displayed on the right-hand side of the web application.

An example of a sample record, and its prediction can be seen in the following figure:

Customer Details

Title

Sales Director

Date Of Birth

1975

Department

Sales

Marital Status

Married

Annual Salary

57000

Country ID

55577

Gross Pay Last Paycheck

2600

Education

Masters

Gross Year To Date

54000

Occupation

Sales

Gross FRS Contribution

52000

Household Size

4

Years In Residence

3

Submit

Customer Eligibility

Eligible

Figure 2 Customer Eligibility Prediction

The second page of the web application will contain the evaluation metrics of the model. Metrics such as the accuracy, precision, recall and f1 score will be displayed. Additionally, the percentage of eligible customers for the baseline model as well as the random forest model will be available. The increase in the number of eligible customers will be calculated and displayed as well. Furthermore, a feature importance plot will be shown on this page to allow the user to view the most relevant feature at a given time. This will allow for informed decisions to be made regarding the features that affect eligibility.

The newly created records along with their predictions will be saved to a csv file for further analysis by the business.

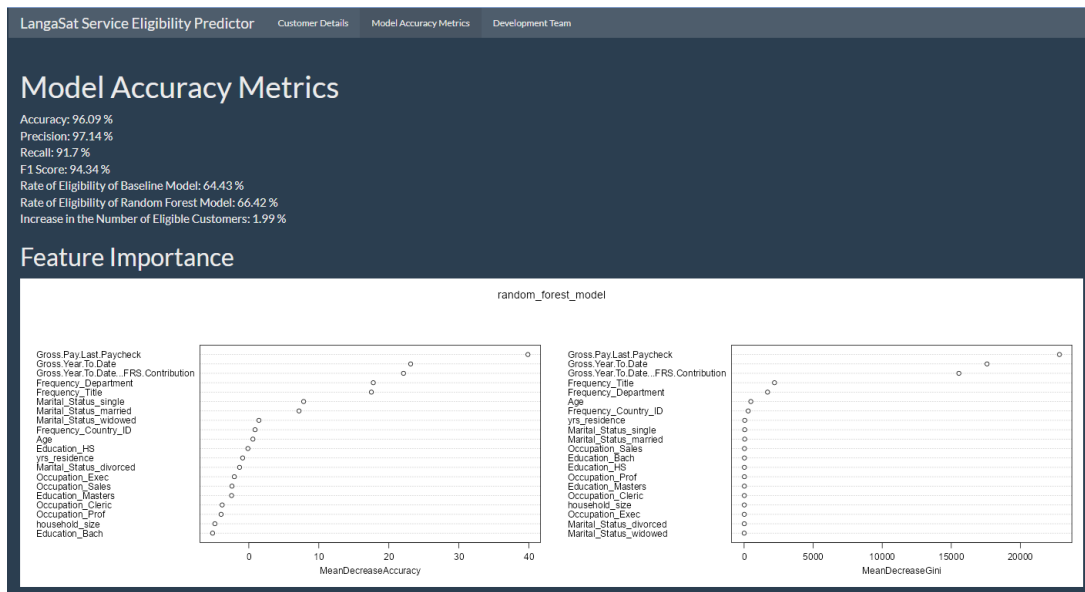


Figure 3 Web Application Model Accuracy Metrics

As an added bonus, the names of the members of the development team will be displayed on the third page, called “Development Team”.

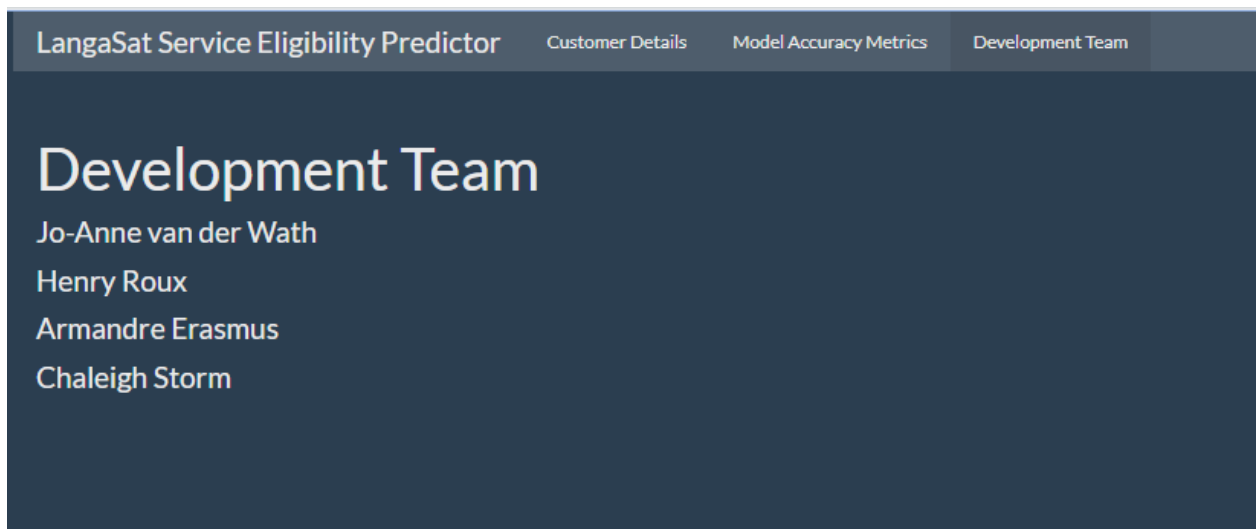


Figure 4 Web Application Development Team

The interface of the web application is simple and easy to use, and any user should easily be able to navigate their way around the application.