

# **Credit Card Default Prediction Model**

*Wireframe Document  
Mehul Rampratap Nayak*

# Wireframes

## Design Wireframes

Wireframe is a basic visual interface guide that suggests the structure of an interface and the relationships between its pages. They serve as a blue print that defines each Web page's structure, content and functionality. Wireframes are created before any design work is started so that the focus is on layout without the distraction of colour and visual elements.

## Gathering Requirements

Wireframes will often help to flush out new requirements and questions that may not have been considered by the project team. Wireframes often end up evolving into the requirements for a system. Wireframes can be created using a variety of software applications online or offline.

## Functional Wireframes

This is another type of wireframe that is used in building web applications. It shows not only how each page is structured but information about each widget, button, field, each piece of content, and what page is rendered by an action. It provides a map of the entire page in the Web site, its function and features. Even the message that may be rendered by a behaviour can be included on this type of wireframe. I wanted to provide some background for this Web application process so that it would be clear what the wireframes represent. The purpose of the Web application is to provide a tool for users to create and maintain FAQs. Users can be either general users (who create and maintain their FAQs) or a system administrator who not only has the same authority to create and maintain FAQs but also maintains users (i.e., assigns new users or deletes existing users). The following screen captures are some of the general user wireframes.

# Homepage

Front page has two sections – Top section has a header with logo and project name which acts as a hyperlink to home URL, bottom section has form to get input from the user. At the end we have submit button to execute the prediction, footer holds publish year and author information.

The screenshot shows a web browser window with the title "Credit Card Defaulter Prediction". The URL bar shows "127.0.0.1:5000". The main content area has a light green background. At the top center, there is a header box with the text "Credit Card Defaulter Prediction". Below this, the form is divided into two main sections: "Demographic data:" and "Behavioral data:". The "Demographic data:" section includes fields for "Gender:" (radio buttons for Male and Female), "Education:" (radio buttons for Graduate School, University, High School, Others, and Unknown), "Marital Status:" (radio buttons for Married, Single, and Others), "Age:" (a text input field with "in years" as a placeholder), and "Limit Balance:" (a text input field with "Amount of given credit in dollar (includes individual and family/supplementary credit)" as a placeholder and "amount in dollar" as a label). The "Behavioral data:" section includes a "Repayment Status:" label with a note "(1=pay duly, 1=one month delay, 2=two months delay, ... 9=delay for nine months and above)", a row of input fields for months April, May, June, July, August, and September, a "Bill Amounts: Amount of bill statements (in dollar)" label, a row of input fields for months April, May, June, July, August, and September, and a "Previous Payments: Amount of previous payments (in dollar)" label with a row of input fields for months April, May, June, July, August, and September. At the bottom center of the form, there is a "Predict" button.

## Input Fields

### Limit Balance

Every Debit/Credit card has limit to purchase or withdraw amount from ATM depending on the type of card. Privileged customers will have more credit to perform transaction in a single day whereas basic customers will have limited usage power. User need to provide integer value matching their transaction limit.

### Gender

Select appropriate gender from the drop down option

### Age

Integer value is required

## Education

User has to select generic education qualification from the options provided

## Marriage

User need to specify customers marriage status for precise prediction

## Payment History

This input field hold many options to select from to specify the customers previous payment practice whether the due has been paid on time or in delay

## Pending Bill Amount

Specify current outstanding bill amount to be paid by the customer

## Bill Amount of Apr, May,...September

Mention all Bill amount for past six months accordingly

## Amount paid in Apr, May,...September

Mention all payments done by the customer for past six months accordingly

The screenshot shows a web browser window with the title 'Credit Card Defaulter Prediction'. The page has a light green background. At the top center, there is a title box with the text 'Credit Card Defaulter Prediction'. Below this, the form is divided into two main sections: 'Demographic data:' and 'Behavioral data:'.  
**Demographic data:**  
- **Gender:** Radio buttons for 'Male' (selected) and 'Female'.  
- **Education:** Radio buttons for 'Graduate School' (selected), 'University', 'High School', 'Others', and 'Unknown'.  
- **Marital Status:** Radio buttons for 'Married' (selected), 'Single', and 'Others'.  
- **Age:** A text input field containing '28'.  
- **Limit Balance:** A text input field containing '15000'.  
**Behavioral data:**  
- **Repayment Status:** A legend indicates: (-1=pay duly; 1=one month delay; 2=two months delay; ... 9=delay for nine months and above). Below this are input fields for April (1), May (-1), June (2), July (2), August (2), and September (2).  
- **Bill Amounts:** A label 'Amount of bill statements (in dollar)'. Below are input fields for April (054489), May (45644), June (12131), July (15515), and August (151561).  
- **Previous Payments:** A label 'Amount of previous payments (in dollar)'. Below are input fields for April (5155), May (31655), June (545454), July (151561), and August (415485).  
At the bottom center of the form, there is a 'Predict' button.

## Predict Page

We will receive input from the user in homepage and execute the prediction process on clicking submit button. The output result will be displayed in between two section aligned centre for convenience.

The screenshot shows a web browser window with the title "Credit Card Defaulter Prediction" and the URL "127.0.0.1:5000/predict". The application interface has a light green background. At the top center, there is a header box with the title "Credit Card Defaulter Prediction". Below this, the form is divided into two main sections: "Demographic data:" on the left and "Behavioral data:" on the right. The "Demographic data:" section includes fields for Gender (radio buttons for Male and Female), Education (radio buttons for Graduate School, University, High School, Others, and Unknown), Marital Status (radio buttons for Married, Single, and Others), Age (a text input field labeled "in years"), and Limit Balance (a text input field labeled "amount in dollar"). The "Behavioral data:" section includes a Repayment Status section with a legend "(1=pay duly, 1=one month delay, 2=two months delay, ... 9=delay for nine months and above)" and input fields for April, May, June, July, August, and September, all with a value of 0. Below this is a Bill Amounts section with the label "Amount of bill statements (in dollar)" and input fields for April, May, June, July, and August, all with a value of 0. Finally, there is a Previous Payments section with the label "Amount of previous payments (in dollar)" and input fields for April, May, June, July, and August, all with a value of 0. At the bottom center of the form, there is a "Predict" button. Below the button, a message box displays the prediction result: "The credit card holder WILL BE DEFAULTER in the next month".

**Credit Card Defaulter Prediction**

**Demographic data:**

**Gender:**

☐ Male ☐ Female

**Education:**

☐ Graduate School ☐ University ☐ High School ☐ Others ☐ Unknown

**Marital Status:**

☐ Married ☐ Single ☐ Others

**Age:** in years

**Limit Balance:**  
Amount of given credit in dollar (includes individual and family/supplementary credit)  
 amount in dollar

**Behavioral data:**

**Repayment Status:**  
(1=pay duly, 1=one month delay, 2=two months delay, ... 9=delay for nine months and above)

April  0 May  0 June  0 July  0 August  0 September  0

**Bill Amounts:** Amount of bill statements (in dollar)

April  0 May  0 June  0 July  0 August  0  
September  0

**Previous Payments:** Amount of previous payments (in dollar)

April  0 May  0 June  0 July  0 August  0  
September  0

**Predict**

**The credit card holder WILL BE DEFAULTER in the next month**

## Predict Again

User can click on the project title in the header to load homepage again and make next prediction providing all the required information of the customer