

Use Cases Description

UI Overview

The app consists of five parts: Data Entry, Analytics Dashboard, Calling Operations, Model Controls, Campaign Customization. Also, there will be the app logo on the top left corner and the user avatar on the top right corner. Click on the user avatar and a sliding menu will appear with selections like “User Profiles”, “Privacy and Security”, “Log out” etc.

Workflow

The user logs into the app and uploaded the existing client information (either with calling details or not), and the app will train a model based on those with calling details, which will output the subset of new or existing clients that have a higher probability to subscribe to the promoting products.

The list of prospective clients will be listed on the Calling Operations page. The user could select all or part of prospective clients in the CO page and assign each of them with a campaign combo, and then dispatch the calling tasks to call centers. After some period of time, there may be calls that lead to successful subscription to the products, or those that fail to convert clients.

These outputs will be the new ground truths for these clients that were called, and their calling histories (last time contacted, duration, # of times contacted within 1 day, etc) will be updated and synced into the database. The model will be re-trained based on the updated information, and the above outcomes and updated client info will also be used for analytics and data visualizations in the Analytics Dashboard.

While during these times, there will also be new client contact info from the user, and another subsets of clients will be those new prospective ones to be taken into the campaigning process.

Page Details

1. Data Entry

Logo		
Data Entry	Please select the approach to upload your data: <input type="button" value="File Upload"/>	
Analytics Dashboard	Please upload your file: bank_mark...selected <input type="button" value="Browse"/> <input type="button" value="Upload"/>	
Calling Operations		
Model Controls	Allowing file types: xlsx, xlsxm, xlsb, xls, xlt, xla, csv	
Campaign customization	File must in the specific format, please see the following for the column specifications: Contact [String]: The mobile/other phone number of the client First Name [String](Optional): The first name of the client Last Name [String](Optional): The last name of the client Age [int]: The numeric integer to represent the client's age Job [String]: The categorical label to mark the position/employment status of the client, available values:	

The data entry page is used to upload or enter client data. The dropdown menu here will be "File Upload" by default, and another option is "Enter by columns". User can click on "Browse" button to browse the file in local machine and upload it when confirmed. There are some notices below like allowed file type, and the file formats. If choose "Enter by columns", there will be an embedded window to enter values of a list of columns like contact, first and last name, age, job, etc, among which some are optional while other are mandatory. Once clicked on "Upload" (or "Submit" on "Enter by columns" page), the data will be fed into the database for analysis or other further usage.

2. Calling Operations

Logo

Data Entry

Analytics Dashboard

Calling Operations

Model Controls

Campaign Customization

Index	Contact	First Name	Last Name	Age	Job
Recently Added & Complemented					
Calling List					
1					
2					
3					
4					
5					
Recently Discarded					

Compos

+

x

Index	Calling Details
1	1,7,5,3,6
2	2,4,8
3	9,10,18
.....

Dispatch Tasks

In the left side there is an embedded table with three sub-panels: Recently Added & Complemented, Calling List, Recently Discarded. Recently Added means the list of contacts added to the database by the user, and Recently Complemented means those existing entries with some features being filled by data acquired from previous callings or client subscription. Calling List is a list of clients that have higher probability to subscribe to the products as evaluated by the model, and they are the prospective targets to be contacted. Recently discarded is a list of contacts that are recently removed from the database because they were recorded in a long time ago (The time gap will be determined later).

In the right side there is another panel to assign calls to specific campaign combos that are configured in the Campaign Customization page. Users can add an existing campaign combo by clicking on the “+” button and the combo will be added to the list with its corresponding combo index (it is determined in another page and will be briefed in later). While adding calls to a combo, simply click on a combo index and the row will be activated while other greyed out. In the mean time the index column in the Calling list will grey out those calls which are already selected in other combos and activate those unselected, and users could click on the desired one to add to the currently editing combo. If a user wants to delete calls from a combo, simply click on the combo and in its Calling Details click on the call indexes to remove the calls. The “x” button is used to delete a combo, and all calls assigned to it will be unselected upon removal.

When completed the call assignment, click on Dispatch Tasks to generate a cvs list of these clients to be called. Note that the app does not actually, literally, dispatch tasks to call centers since this should be handled by the company offline. A call center should have its own narratives to advertise using the information in the campaign combos for the calls assigned to its location. It is beyond the scope of this app and the variation of campaigning contents have little influence on the model.

3. Campaign Customization

The screenshot shows a web application interface for 'Campaign Customization'. On the left is a vertical sidebar with a 'Logo' placeholder at the top and a list of menu items: 'Data Entry', 'Analytics Dashboard', 'Calling Operations', 'Model Controls', and 'Campaign Customization' (which is highlighted). The main content area is divided into three sections: 'Products', 'Offers', and 'Contents & Placements'. Each section has a '+' button to add a new component. The 'Products' section shows a component with a 'Title' field, a 'Text Description' field, and a '-' button. The 'Offers' section shows a component with a 'O1' label and a '-' button. The 'Contents & Placements' section shows a component with a 'C1' label and a '-' button. On the right side, there is a 'Combos' section with a '+' button, an 'X' button, and a 'Reset' button. Below these is a table with two columns: 'Index' and 'Combo Details'. The table contains three rows of data: Index 1 with 'P1+O1+C1', Index 2 with 'P2+O2+C2', and Index 3 with 'P3+O3+C3'. The table has a vertical scrollbar on the right.

Index	Combo Details
1	P1+O1+C1
2	P2+O2+C2
3	P3+O3+C3
.....

The Campaign Customization page is used to customize the campaign combos. Each campaign combo in our context contains product + offer + content & placement. Since our app is used for telephonic campaigning, so the channel will be telephone only. In each campaigning element section there will be a “+” button to add a new component which includes title and text description, and in each component there is a “-” button to remove the current component and another checking button indicating the grouping index (will be explained later).

On the right side there is a combo assembly section to customize the campaign combos. Click “+” to add a new campaign combo with an incremented combo index. Click on one combo index to edit the combo details. User can now select one available component from each element and group them together, during which time the grouping index will be in the form of “X+combo index” where X=P for Product, O for Offers, C for Contents and Placements. For example, we are editing a new combo indexed with 7, and we chose a product, an offer and a C&P, now the corresponding components will have their grouping index buttons highlighted with P7, O7, C7 and in the assembly section the combo index 7 will have details “P7+O7+C7”. Also, while removing one component from the combo, select the combo index and click on the component grouping index to remove it. The “X” button is used to remove a campaign combo, and the combo will be removed and components will be re-available upon clicked.

The customization on this page will be reflected on the Calling Operation page. Any combo without a complete P+O+C is not acceptable and the app will pop out warnings to stop further operations.