**COG3NT PRODUCT MANAGEMENT AND CLUSTERING SYSTEM**

**Version 1.0.1**

*USER MANUAL*

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Contents

[**LOGIN** 3](#_Toc84993869)

[**USERS:** 3](#_Toc84993870)

[**FUNCTIONALITY:** 3](#_Toc84993871)

[**STEPS:** 3](#_Toc84993872)

[**PRODUCT MANAGEMENT SYSTEM** 4](#_Toc84993873)

[**USERS:** 4](#_Toc84993874)

[**FUNCTIONALITY:** 4](#_Toc84993875)

[**STEPS:** 4](#_Toc84993876)

[**Upload an excel workbook with product entity details** 4](#_Toc84993877)

[**Navigate through the product index page to view all new records** 6](#_Toc84993878)

[**Select a product to edit** 6](#_Toc84993879)

[**Select a Product to view details** 7](#_Toc84993880)

[**Create a Product** 8](#_Toc84993881)

[**Delete a Product** 9](#_Toc84993882)

[**PRODUCT CLUSTERING** 10](#_Toc84993883)

[**USERS:** 10](#_Toc84993884)

[**FUNCTIONALITY:** 10](#_Toc84993885)

[**STEPS:** 10](#_Toc84993886)

[**Upload a text file with transactions summary** 10](#_Toc84993887)

[**Navigate through the Products Index page or use the search bar to find a product** 11](#_Toc84993888)

[**Select a Product to view Recommendations** 12](#_Toc84993889)

[**BACK-END MODIFICATIONS- FOR DEVELOPERS** 13](#_Toc84993890)

[**PRODUCT CLUSTERING** 13](#_Toc84993891)

[**RETRAINING THE MODEL** 13](#_Toc84993892)

# 

# **LOGIN**

## **USERS:**

Product managers, Marketing & Sales Managers or

Single store owners

## **FUNCTIONALITY:**

Sign Up

Login

**NOTE:**

The database has two login details for the two users.

Login details :

[Email- Cog3nt17@gmail.com](mailto:Email-%20Cog3nt17@gmail.com)

Password- Cog3nt10!!

## **STEPS:**

### **Select Sign up from the Navigation bar**

**Graphical user interface, application

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### **Fill in the email and password fields and click register**

**Graphical user interface, application

Description automatically generated**

### **Fill in the email and password fields and click login**

**Graphical user interface, website

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### **Wait for the page to refresh before your identity is displayed on the top right corner of the navigation bar**

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# **PRODUCT MANAGEMENT SYSTEM**

## **USERS:**

Product Managers Or Single Store Owners

## **FUNCTIONALITY:**

View existing database records

Apply CRUD operation on database records

**NOTE:**

Database is pre-populated with 60 products. If you wish to start afresh then after upload of your excel workbook, simply delete the records you are no longer satisfied with.

## **STEPS:**

Upload an excel workbook with product entity details

Navigate through the product index page to view all new records

Select a product to edit

Select a product to view details

Create a new product

Select a product to delete

### **Upload an excel workbook with product entity details**

**PRE-REQUISITES:**

* **A test excel workbook (trans\_products.xlsx) is provided for one to utilise when running the app. Optionally, you can utilise your own source documentation:**
  + *Your excel file should have the following headers:*
  + *Ensure that all columns are formatted to the following data types:*

***ID, ProductID, SKU, OrderSKU, OrderProductID, UnitsPerCase****: Number (type int)*

***ProductName****: Text ( type string)*

***ModifiedDate, ImportDate****: Date (type datetime)*

1. Text

   Description automatically generated with low confidenceSelect the Products item on the navigation bar
2. Graphical user interface, application

   Description automatically generatedChoose the appropriate excel file for upload
3. Graphical user interface, application

   Description automatically generatedSelect Upload and respond to the alert box

### **Navigate through the product index page to view all new records**

1. Table

   Description automatically generatedNavigate with the **Prev/Next** buttons to view your products

### **Select a product to edit**

1. Table

   Description automatically generatedSelect the edit button for your desired product
2. Modify the details you want to change and press save

Graphical user interface, application

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### **Select a Product to view details**

1. From the index products list, click on the Details button

Table

Description automatically generated

1. A picture containing text

   Description automatically generatedWait to be redirected to your chosen product’s details. When satisfied, navigate with either the *edit* or the *back to List* button

### **Create a Product**

1. Table

   Description automatically generatedFrom the index products list, click on the *Create New* button of your desired product

### **Delete a Product**

1. From the index products list, click on the *delete* button of your desired product

Table

Description automatically generated

1. Use the buttons to either confirm deletion or navigate back to the list

Graphical user interface

Description automatically generated

# **PRODUCT CLUSTERING**

## **USERS:**

Marketing & Sales Manager Or Single Store Owners

## **FUNCTIONALITY:**

View existing database records

View recommendations for sale

**NOTE:**

Recommendations are generated using Machine Learning and a pre-trained Machine Learning Model based on previous transactions. Refer to the Back-end modifications to explore more on retraining models.

## **STEPS:**

Upload a text file with transactions summary

Navigate through the product index page to view existing records

Select a product to view recommendations

### **Upload a text file with transactions summary**

**PRE-REQUISITES:**

* **A test text file (trans\_.txt) is provided for one to utilise when running the app. Optionally, you can utilise your own source documentation:**
  + *Your text file should be a tab or comma separated text file with the following headers:*

**

* + *Ensure that all values entered are numbers (type int) and fall within the correct columns (tabbing entries):*

*Text

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1. Text

   Description automatically generated with low confidenceSelect the *Cluster Products item on the navigation bar*
2. Choose an appropriate text file to uploadGraphical user interface, website

   Description automatically generated
3. Select Upload and respond to the alert box

Graphical user interface, application

Description automatically generated

### **Navigate through the Products Index page or use the search bar to find a product**

**Table

Description automatically generated**

### **Select a Product to view Recommendations**

1. **Table

   Description automatically generated**Select the Recommendations button to view predicted recommendations for your desired product
2. Wait to be redirected to the recommendations page of your chosen product. Once done viewing records, use the Back to List button to navigate back to the products page

A picture containing website

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# **BACK-END MODIFICATIONS- FOR DEVELOPERS**

**NOTE:**

Please contact your IT administrator to make modifications to any back-end code. Future versions may address issues covered in this section but if there is a dire need for a specific functionality, then it is advisable to consult your in-house IT department or an IT consultant from our company.

If you do wish to learn more about the algorithm and explore variations of the model then use the **Algorithm.sln** solution to build and train ML models.

The latest version of Visual Studio is required to do any modifications.

## **PRODUCT CLUSTERING**

### **RETRAINING THE MODEL**

**NOTE:**

If you have added additional products to your database then your ML model needs to be retrained to accept a new range of values to consider within your database. The current max range is set to 200.

**To increase the range:**

Navigate to the **Program.cs** file of the Algorithm console app solution and change the following to your desired max range:



Check the following folder path within the Visual Studio solution explorer to find your new model

****

**To implement the retrained model into the CPMCS:**

Replace the current MLModel.zip within the solution explorer with the newly generated one from the Algorithm.sln project.

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**NOTE:**

To increase accuracy of the algorithm, the train-test ratio can be lowered to 70%-30% but we recommend keeping it at 80%-20%

**To decrease the train-test ratio:**

Navigate to the Program.cs file of the Algorithm console app solution and change the following to your desired train-test ratio:

****