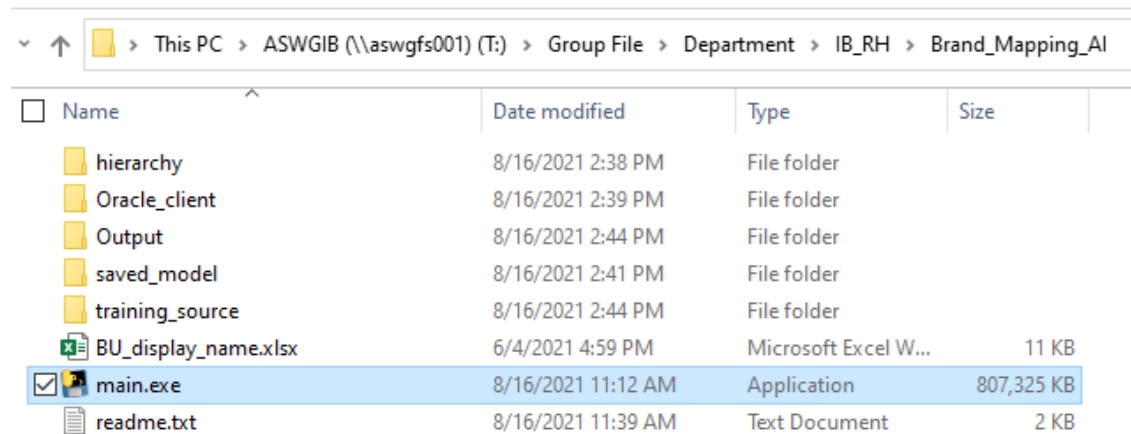


# WHERE TO START

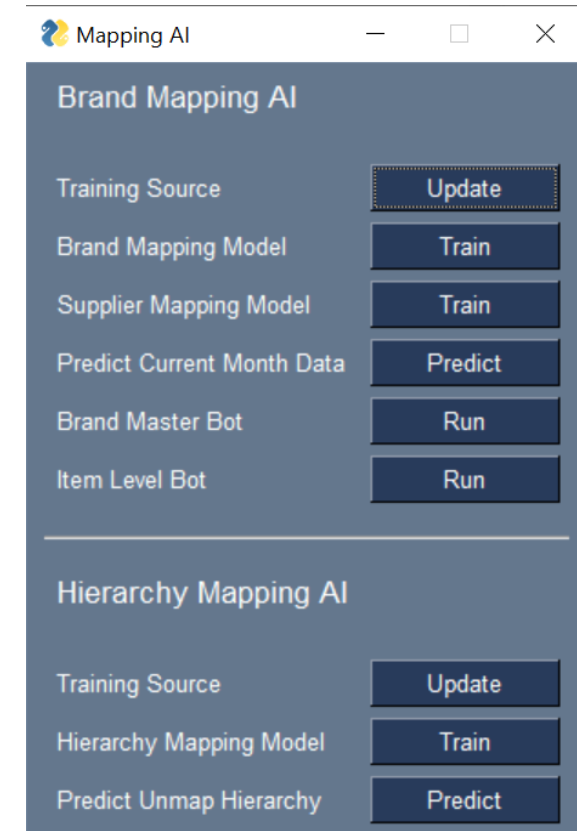
Go to T:\Group File\Department\IB\_RH\Brand Mapping AI



| This PC > ASWGIB (\\aswgfs001) (T:) > Group File > Department > IB_RH > Brand_Mapping_AI |                      |                    |                      |            |
|--|----------------------|--------------------|----------------------|------------|
| <input type="checkbox"/>   | Name                 | Date modified      | Type                 | Size       |
|  | hierarchy            | 8/16/2021 2:38 PM  | File folder          |            |
|  | Oracle_client        | 8/16/2021 2:39 PM  | File folder          |            |
|  | Output               | 8/16/2021 2:44 PM  | File folder          |            |
|  | saved_model          | 8/16/2021 2:41 PM  | File folder          |            |
|  | training_source      | 8/16/2021 2:44 PM  | File folder          |            |
|  | BU_display_name.xlsx | 6/4/2021 4:59 PM   | Microsoft Excel W... | 11 KB      |
| <input checked="" type="checkbox"/>  | main.exe             | 8/16/2021 11:12 AM | Application          | 807,325 KB |
|  | readme.txt           | 8/16/2021 11:39 AM | Text Document        | 2 KB       |



- To speed up launching time of the program, it is recommended to copy the entire folder to your own drive so that the program can bypass network limitation

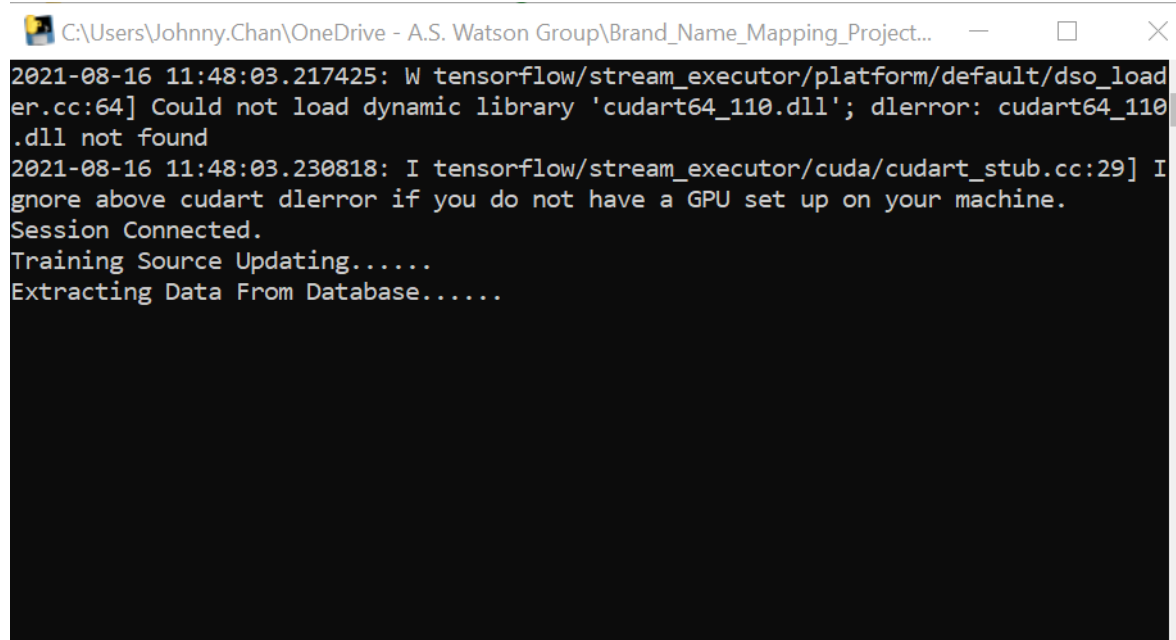
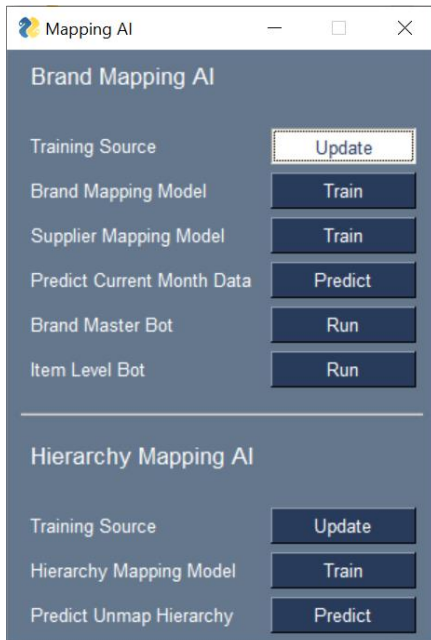


# BRAND MAPPING AI

## TRAINING SOURCE UPDATE

As data comes in monthly, BI team would map the correct brand name into system. This function will then call Oracle SQL API and extract previous month data from database. After this step, Deep Learning Model is ready to be trained.

- Source 1: IB Brand Master
- Source 2: Previous Month Data



# BRAND MAPPING AI

## TRAIN BRAND MAPPING MODEL

After updating latest training source, you may start training the model.

### Brand Mapping Model

Mapping AI

Brand Mapping AI

|                            |         |
|----------------------------|---------|
| Training Source            | Update  |
| Brand Mapping Model        | Train   |
| Supplier Mapping Model     | Train   |
| Predict Current Month Data | Predict |
| Brand Master Bot           | Run     |
| Item Level Bot             | Run     |

---

Hierarchy Mapping AI

|                         |         |
|-------------------------|---------|
| Training Source         | Update  |
| Hierarchy Mapping Model | Train   |
| Predict Unmap Hierarchy | Predict |

### Supplier Mapping Model

Mapping AI

Brand Mapping AI

|                            |         |
|----------------------------|---------|
| Training Source            | Update  |
| Brand Mapping Model        | Train   |
| Supplier Mapping Model     | Train   |
| Predict Current Month Data | Predict |
| Brand Master Bot           | Run     |
| Item Level Bot             | Run     |

---

Hierarchy Mapping AI

|                         |         |
|-------------------------|---------|
| Training Source         | Update  |
| Hierarchy Mapping Model | Train   |
| Predict Unmap Hierarchy | Predict |

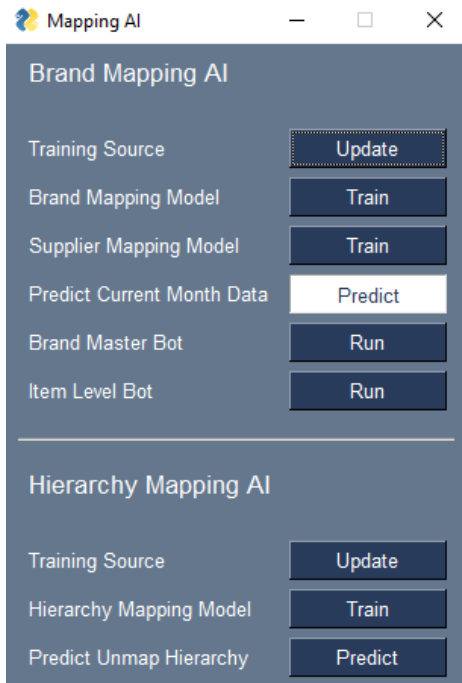
Select C:\Users\Johnny.Chan\OneDrive - A.S. Watson Group\Brand\_Name\_Mapping\_Project\main.exe

| Layer (type)                     | Output Shape    | Param # | Connected to          |
|----------------------------------|-----------------|---------|-----------------------|
| input_2 (InputLayer)             | [(None, 10)]    | 0       |                       |
| embedding (Embedding)            | (None, 10, 64)  | 316672  | input_2[0][0]         |
| conv1d (Conv1D)                  | (None, 10, 128) | 24704   | embedding[0][0]       |
| max_pooling1d (MaxPooling1D)     | (None, 10, 128) | 0       | conv1d[0][0]          |
| dropout_1 (Dropout)              | (None, 10, 128) | 0       | max_pooling1d[0][0]   |
| conv1d_1 (Conv1D)                | (None, 10, 128) | 49280   | dropout_1[0][0]       |
| input_1 (InputLayer)             | [(None, 44)]    | 0       |                       |
| max_pooling1d_1 (MaxPooling1D)   | (None, 10, 128) | 0       | conv1d_1[0][0]        |
| dense (Dense)                    | (None, 32)      | 1440    | input_1[0][0]         |
| dropout_2 (Dropout)              | (None, 10, 128) | 0       | max_pooling1d_1[0][0] |
| dropout (Dropout)                | (None, 32)      | 0       | dense[0][0]           |
| global_max_pooling1d (GlobalMax) | (None, 128)     | 0       | dropout_2[0][0]       |

# BRAND MAPPING AI

## PREDICT CURRENT MONTH DATA

Call Oracle SQL API to extract current month data and predict all the brand names.



The screenshot shows a web application window titled "Mapping AI". It contains two main sections: "Brand Mapping AI" and "Hierarchy Mapping AI". Each section has a list of controls with corresponding buttons.

| Brand Mapping AI           |                          |
|----------------------------|--------------------------|
| Training Source            | <button>Update</button>  |
| Brand Mapping Model        | <button>Train</button>   |
| Supplier Mapping Model     | <button>Train</button>   |
| Predict Current Month Data | <button>Predict</button> |
| Brand Master Bot           | <button>Run</button>     |
| Item Level Bot             | <button>Run</button>     |

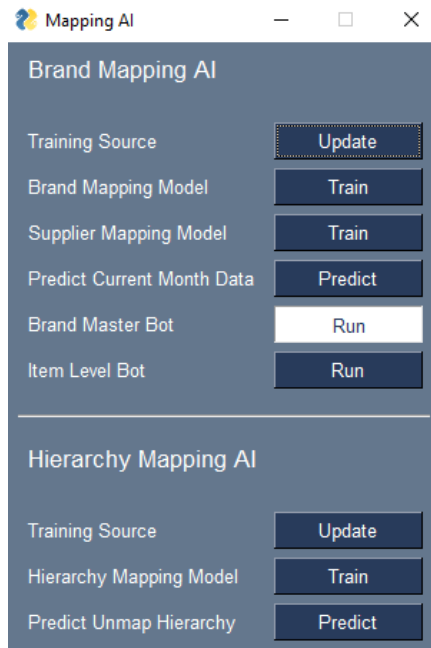
---

| Hierarchy Mapping AI    |                          |
|-------------------------|--------------------------|
| Training Source         | <button>Update</button>  |
| Hierarchy Mapping Model | <button>Train</button>   |
| Predict Unmap Hierarchy | <button>Predict</button> |

# BRAND MAPPING AI

## BRAND MASTER BOT

- Since not all brand names need to map, the program will collect input from Partnership Team and hence AI knows which names are required to map.
- If the prediction result match with input from Partnership, that brand will then show up on an Excel Table.
- Go to T:\Group File\Department\IB\_RH\Brand Mapping AI\Output\Brand Master Bot.xlsx to check the result



```
Session Connected.  
Brand Master Bot Is Running.....  
A-Brand: 2512 records found. | Have sales: 820 | No sales: 1692  
Luxury: 645 records found. | Have sales: 236 | No sales: 409  
Exclusive: 109 records found. | Have sales: 54 | No sales: 55  
Brand Master Bot Finished Running.
```

roup File > Department > IB\_RH > Brand\_Mapping\_AI >

| <input type="checkbox"/> Name              | Date modified      |
|--|--------------------|
| hierarchy                                  | 8/16/2021 2:38 PM  |
| Oracle_client                              | 8/16/2021 2:39 PM  |
| <input checked="" type="checkbox"/> Output | 8/16/2021 2:44 PM  |
| saved_model                                | 8/16/2021 2:41 PM  |
| training_source                            | 8/16/2021 2:44 PM  |
| BU_display_name.xlsx                       | 6/4/2021 4:59 PM   |
| main.exe                                   | 8/16/2021 11:12 AM |
| readme.txt                                 | 8/16/2021 11:39 AM |



Department > IB\_RH > Brand\_Mapping\_AI > Output

| <input type="checkbox"/> Name                             | Date modified      |
|---|--------------------|
| 000_prediction_result.xlsx                                | 8/5/2021 4:37 PM   |
| <input checked="" type="checkbox"/> Brand_Master_Bot.xlsx | 8/13/2021 6:09 PM  |
| bu_monthly_checking_NN_Prediction....                     | 8/11/2021 10:38 AM |
| Item_Level_Bot.xlsx                                       | 8/16/2021 10:35 AM |

# BRAND MAPPING AI

## ITEM LEVEL BOT

- Shows maximum 5 random products description, hierarchy, and supplier under a specific brand.
- Open <T:\Group File\Department\IB RH\Brand Mapping AI\Output\Brand Master Bot.xlsx>
- Select the brand you want to check and input 'y' under column Q, then run Item Level Bot

|   | A         | B          | C              | D           | E       | F            | G           | H        | I          | J            | K           | L           | M            | N        | O        | P          | Q                |
|---|-----------|------------|----------------|-------------|---------|--------------|-------------|----------|------------|--------------|-------------|-------------|--------------|----------|----------|------------|------------------|
| 1 | Supplier  | Display Na | Brand          | Updated Dat | BU Code | Id Name (Pre | Brand (Prob | Brand Na | Brand Name | Supplier Mat | Supplier Co | Supplier Na | Company (Per | Company  | Company  | Sales Flag | Check Item Level |
| 2 | INTER PA  | TPS        | ANNA SUI       | #####       | TPSUK   | ANNA SUI     | 1           | ANNA SUI | ANNA SUI   | Unmatch      | 7010        | FRAGRAN     | COTY PRE     | OTHER SU | OTHER SU | No Sales   | y                |
| 3 | CHRISTIAN | ICI BE     | CHRISTIAN DIOR | #####       | ICIBE   | CHRISTIAN C  | 1           | DIOR BAC | DIOR BAC   | Match        | 30149       | DIOR CHR    | CHRISTIA     | OTHER SU | OTHER SU | No Sales   | y                |
| 4 | CHRISTIAN | ICI BE     | CHRISTIAN DIOR | #####       | ICIBE   | CHRISTIAN C  | 1           | DIOR BAC | DIOR BAC   | Match        | 30149       | DIOR CHR    | CHRISTIA     | OTHER SU | OTHER SU | No Sales   | y                |
| 5 | CHRISTIAN | ICI BE     | CHRISTIAN DIOR | #####       | ICIBE   | CHRISTIAN C  | 1           | DIOR BAC | DIOR BAC   | Match        | 30149       | DIOR CHR    | CHRISTIA     | OTHER SU | OTHER SU | No Sales   |                  |
| 6 | CHRISTIAN | ICI BE     | CHRISTIAN DIOR | #####       | ICIBE   | CHRISTIAN C  | 1           | DIOR BAC | DIOR BAC   | Match        | 30149       | DIOR CHR    | CHRISTIA     | OTHER SU | OTHER SU | No Sales   |                  |



- Go to: <T:\Group File\Department\IB RH\Brand Mapping AI\Output\Item Level Bot.xlsx> to check the result

| A       | B                 | C              | D                             | E            | F                  | G               | H               | I               | J               | K     |
|---------|-------------------|----------------|-------------------------------|--------------|--------------------|-----------------|-----------------|-----------------|-----------------|-------|
| BU Code | BU Brand Name     | RODUCT_DESC_EN | PRODUCT_DESC_OTHERS           | PRODUCT_CODE | SUPPLIER_NAME      | AL_HIERARCHY_DE | AL_HIERARCHY_DE | BAL_HIERARCHY_D | BAL_HIERARCHY_D | Count |
| TPSUK   | ANNA SUI SKY      | -              | ANNA SUI MINIATURE SET*       | 1265313      | FRAGRANCE FACTC    | TPS             | WOMENS FRAGRA   | FRAGRANCES      | WOMEN FRAGRAN   | 1     |
| TPSUK   | ANNA SUI SKY      | -              | ANNA SUI SKY EDTV50ML         | 1265390      | FRAGRANCE FACTC    | TPS             | WOMENS FRAGRA   | FRAGRANCES      | WOMEN FRAGRAN   | 2     |
| TPSUK   | ANNA SUI SKY      | -              | GWP ANNA SUI SAMPLE SET       | 1265866      | FRAGRANCE FACTC    | TPS             | WOMENS FRAGRA   | FRAGRANCES      | WOMEN FRAGRAN   | 3     |
| ICIBE   | DIOR BACKSTAGE P- | -              | BACKSTAGE PINCEAU FDT         | 357361       | DIOR CHRISTIAN S., | MAQUILLAGE SEL. | ACCESSORIES     | GENERAL MERCHA  | BEAUTY IMPLEMEN | 1     |
| ICIBE   | DIOR BACKSTAGE P- | -              | DIORSKIN NUDE PWD FOUND.BRUSH | 437168       | DIOR CHRISTIAN S., | MAQUILLAGE SEL. | ACCESSORIES     | GENERAL MERCHA  | BEAUTY IMPLEMEN | 2     |
| ICIBE   | DIOR BACKSTAGE P- | -              | PINCEAU VISAGE                | 288824       | DIOR CHRISTIAN S., | MAQUILLAGE SEL. | ACCESSORIES     | GENERAL MERCHA  | BEAUTY IMPLEMEN | 3     |
| ICIBE   | DIOR BACKSTAGE P- | -              | SUMMER BRUSH COLLECTION 2013  | 627925       | DIOR CHRISTIAN S., | MAQUILLAGE SEL. | ACCESSORIES     | GENERAL MERCHA  | BEAUTY IMPLEMEN | 4     |
| ICIBE   | DIOR BACKSTAGE P- | -              | PINCEAU LEVRES                | 288880       | DIOR CHRISTIAN S., | MAQUILLAGE SEL. | ACCESSORIES     | GENERAL MERCHA  | BEAUTY IMPLEMEN | 1     |

Mapping AI

Brand Mapping AI

Training Source
Update

Brand Mapping Model
Train

Supplier Mapping Model
Train

Predict Current Month Data
Predict

Brand Master Bot
Run

Item Level Bot
Run

Hierarchy Mapping AI

Training Source
Update

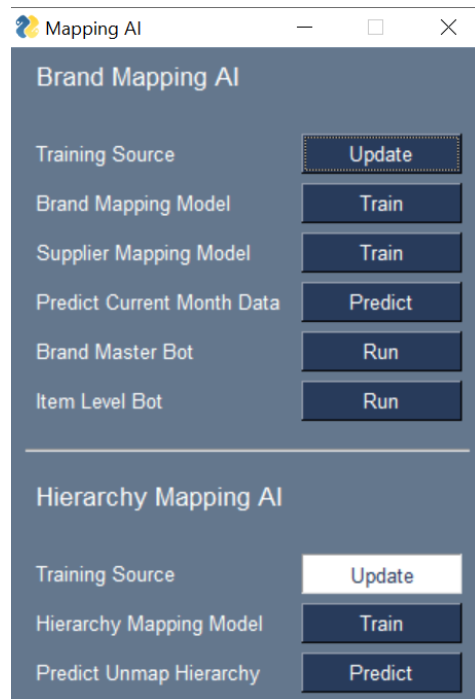
Hierarchy Mapping Model
Train

Predict Unmap Hierarchy
Predict

# HIERARCHY MAPPING AI

## TRAINING SOURCE UPDATE

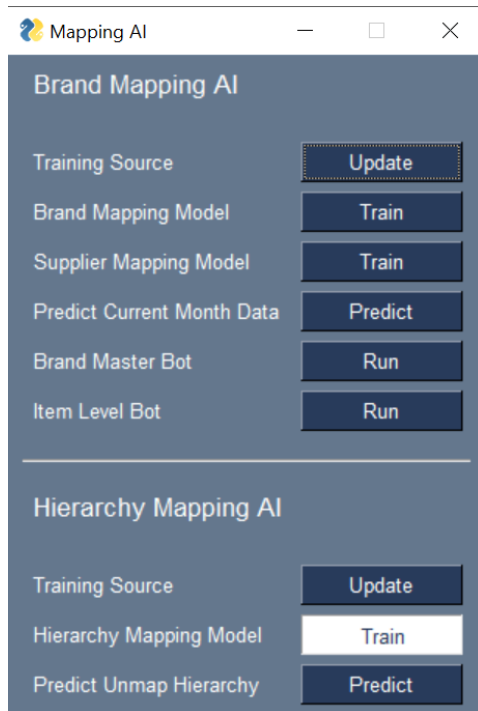
Call Oracle SQL API and extract latest hierarchy mapping. After this step, Deep Learning Model is ready to be trained.



# HIERARCHY MAPPING AI

## TRAIN HIERARCHY MAPPING MODEL

Call Oracle SQL API and extract latest hierarchy mapping. After this step, Deep Learning Model is ready to be trained.



The screenshot shows a web application window titled "Mapping AI". It contains two main sections: "Brand Mapping AI" and "Hierarchy Mapping AI". Each section has a list of controls with corresponding action buttons.

| Brand Mapping AI           |                          |
|----------------------------|--------------------------|
| Training Source            | <button>Update</button>  |
| Brand Mapping Model        | <button>Train</button>   |
| Supplier Mapping Model     | <button>Train</button>   |
| Predict Current Month Data | <button>Predict</button> |
| Brand Master Bot           | <button>Run</button>     |
| Item Level Bot             | <button>Run</button>     |

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| Hierarchy Mapping AI    |                          |
|-------------------------|--------------------------|
| Training Source         | <button>Update</button>  |
| Hierarchy Mapping Model | <button>Train</button>   |
| Predict Unmap Hierarchy | <button>Predict</button> |

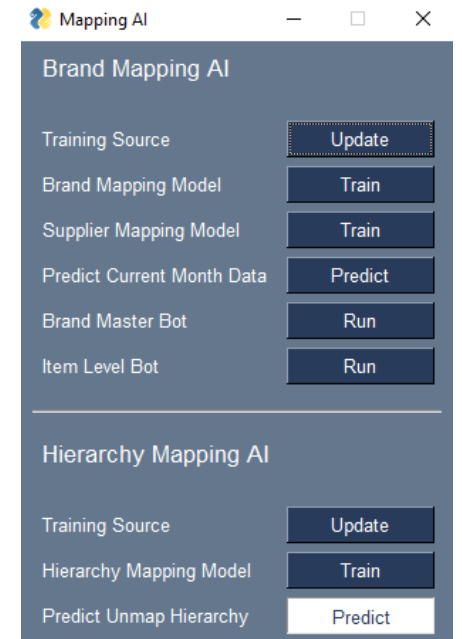
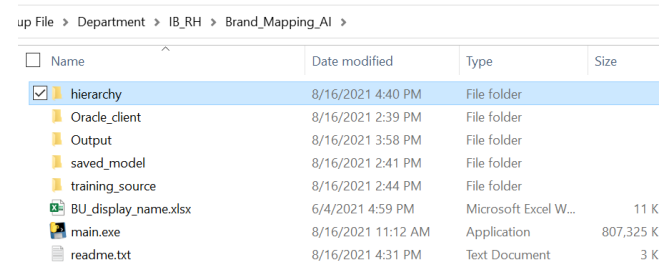
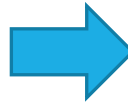
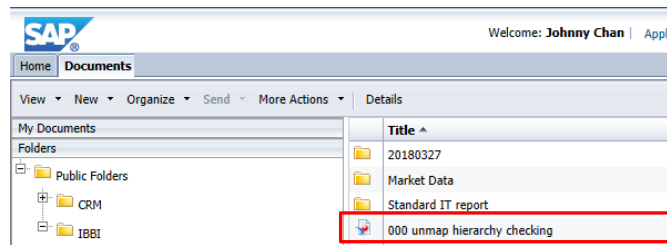


# HIERARCHY MAPPING AI

## PREDICT UNMAP HIERARCHY

Call Oracle SQL API and extract latest hierarchy mapping. After this step, Deep Learning Model is ready to be trained.

- Please generate 000unmap file from Business Object and name it as "000 unmap hierarchy checking.xlsx".
- Put the file under folder "hierarchy".



- Run the program.
- Go to T:\Group File\Department\IB\_RH\Brand Mapping AI\Output\000 prediction result.xlsx to check the result.