



Lab: PMML in DSX

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Overview

In this lab you will learn how to import PMML files into DSX and configure them for scoring.

Required software, access, and files

- To complete this lab, you will need access to a DSX Local cluster.
- You will also need to download and unzip this GitHub repository:
https://github.com/elenalowery/DSX_Local_Workshop

Part 1: Load and Deploy PMML model

1. Navigate to the **DSX_Local_Workshop** project that you imported during one of the previous labs (your project name may be different).
2. Switch to the **Assets** tab. Scroll to **Models** and click **add model**. Select **From File**. Provide *model name* and select model type *PMML*.
3. Click **Browse**. Navigate to the *PMML/PMML files* folder of the unzipped GitHub repository and select *SPSS_ResponseChannel.xml*. Click **Create**.

Note: this PMML file was generated from a model created in SPSS Modeler. It predicts the recommended marketing channel (direct mail, mobile, e-mail) for a customer.

The screenshot shows the 'Add Model' interface. At the top, there are two tabs: 'DSX' and 'From File', with 'From File' being the active tab. Below the tabs, there are four main sections: 'Name', 'Description', 'Type', and 'File'. The 'Name' field contains 'SPSS_ResponseChannel'. The 'Description' field contains 'Model description'. The 'Type' dropdown menu is set to 'PMML'. The 'File' field shows a file named 'SPSS_ResponseChannel.xml' with a green checkmark icon, indicating it has been successfully selected.

4. Click the **Publish** tab.



Provide *Published name* (make it unique, for example, add your initials) and select the scope for the project (you can publish to the same project as the model). Click **Publish**.

Publish Model

Model name

SPSS_ResponseChannelVatest

Published name *

SPSS_ResponseChannel_EL

Description

Published model visibility

Restricted to collaborators in the selected project

DSX_Local_Workshop

*Note: If **Publish** throws an error, then navigate to **Project Details**, scroll down to Models and select **Publish** next to the imported PMML.*

Models (1)				All	(1) Add model
NAME	TYPE	STATUS	LAST MODIFIED		
 SPSS_ResponseChannel 	pmml-enclosed-3.0	Imported	10.000.0010.0.00 AM		

- Switch to **Model Management** view (from the main menu in the top left corner) and select the **Models** tab. Click on the model to bring up the model details view.



- In the model details view, scroll down and click **Deploy**. Provide deployment name (make it unique) and click **Create**.

Create deployment

Model Name

SPSS_ResponseChannel_EL

Name *

ResponseChannel_EL_Online

Type *

Online

Engine

PMML 3.0

- The endpoint URL can be used by other applications to invoke scoring.

DEPLOYMENT NAME

ResponseChannel_EL_Online

EXTERNAL SCORING ENDPOINT

https://9.30.147.31/v1/score/online/pmml-3.0/pmml-model-3.0/DSX_Local_Workshop/SPSS_ResponseChannel_EL/ResponseChannel_EL_Online



- Next, we will test the model with a notebook. Navigate to the **Projects** view and open the *PMMLTestClient.ipynb* notebook.

Note: if you would like to use the Test UI, you can use the following values (don't provide quotes for the strings).

```
"Customer ID":10150,
"Gender":"F",
"Affinity":"Womens Sportwear",
"Annual Spend":411.354000,
"Loyalty Program Member":"NO",
"Response Channel":"Mobile",
"CLV":41135.400000,
"Anastasia Beverly Hills":"F",
"Discount of Womens Active Shoes":"F",
"Dress sale - 30 percent off":"F",
"Home Closeout":"F",
"Johnston and Murphy":"F",
"Lancome Gift with Purchase":"F",
"Shoe and Handbag sale":"F",
"Free shipping on orders over $49":"F",
"Save 10% with store pickup":"T",
"Womens Sweater Sale":"T",
"Save 20% Career Suits":"T"
```

9. While we went through the Publish/Deploy process, in the notebook we are using the “internal endpoint” which doesn’t require authentication. We provided this example because it’s easier to set up in a demo.

The prediction for the provided values is "Mobile" channel.

```

1. a. [{"success":true,"description":"Success","object":{"fields":{"Lancome Gift with Purchase","Shoe and Handbag sale","Affinity","Save 10% with store pickup","Home Closeout","Save 20% Career Suits","Discount of Womens Activ
2. e Shoes","Free shipping on orders over $49","Loyalty Program Member","Johnston and Murphy","Amaantasia Beverly Hills","Gender","Annual Spend","Dress sale - 30 percent off","Womens Sweater Sale","Response Channel"},"rec
3. o rds":[{"p","p","Womens Sportswear","p","p","p","p","p","NO","p","p","p","411.354","p","p","Mobile"}]}]}
4. i
5. l
6. e

```

If you wish, you can change input data to the following:

12582,"M","Mens
Sportswear",256.014000,"NO","Email",25601.400000,"T","T","F","F","F","F","T","T","F","T","F"

Then the prediction is to contact the customer via direct mail.

```
{
  "fields": ["Lancome Gift with Purchase", "Shoe and Handbag sale", "Affinity", "Save 10% with store pickup", "Home Closeout",
49, "Loyalty Program Member", "Johnston and Murphy", "Anastasia Beverly Hills", "Gender", "Annual Spend", "Dress sale - 30 pe
"records": [{"F", "T", "Mens Sportswear", "F", "F", "F", "T", "T", "NO", "F", "T", "M", 256.014, "F", "T", "Direct Mail"}]]
```

You have finished PMML in DSX Local lab.