

# Phase :03

## Development Part:01

### Project:Machine Learning Model Deployment with IBM Watson Studio (ISP Churn Model)

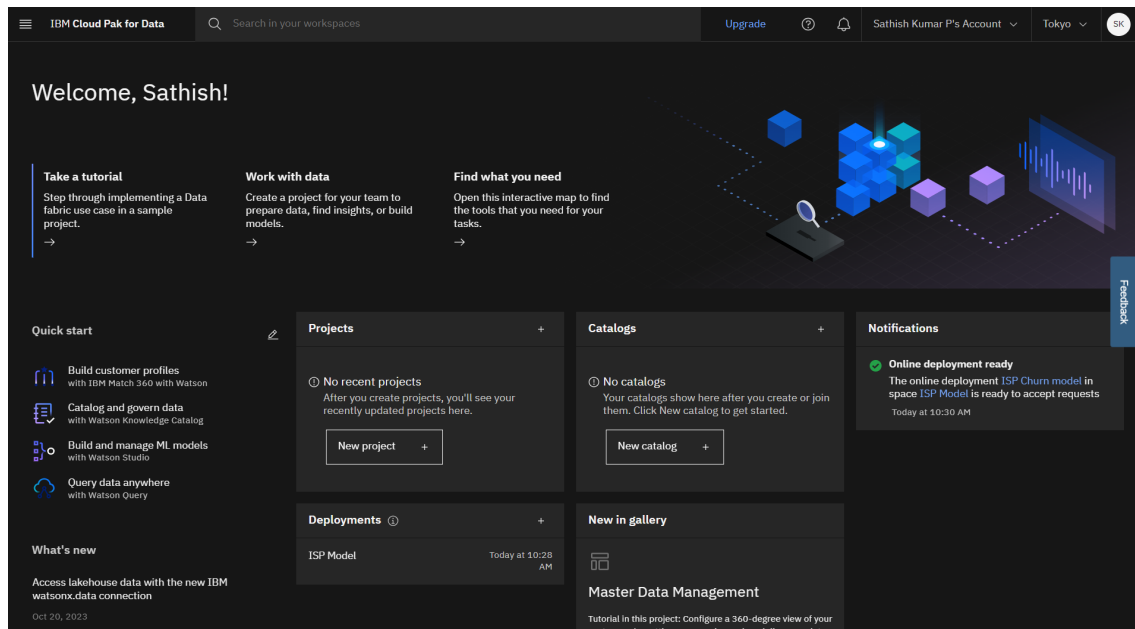
#### Introduction:

In, This phase our team started doing the machine learning model deployment using watson studio. The Steps involved are mentioned below. First, before starting IBM Cloud Account must be created ,to do that we followed the pre work instruction in the skillup. Then login to the Account and follow the steps.

#### Step:01

Go to IBM Cloud Pak Then,

Click ML models to create a project



IBM Cloud Pak for Data

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Sathish Kumar P's Account

Tokyo

SK

## New project

Define details

Name

ISP Chrun Prediction Model

Description (optional)

To predict the internet service provider customers churn

Controls

☒ Restrict who can be a collaborator ⓘ

☐ Mark as sensitive ⓘ

Storage

Project includes integration with [Cloud Object Storage](#) for storing project assets.

CloudObjectStorage

Cancel

Create

## Step:02

Add the Dataset for the model Dataset referred from Koogle.com  
Click the right side column to add

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Projects / ISP Chrun Prediction Model

Overview

Assets

Jobs

Manage

Find assets

Import assets

New asset +

0 asset

All assets

Asset types

After you create assets, they are organized by asset type.

All assets

Start adding assets

To get started with project assets, click **New asset** to create them, or **Import assets** to add existing ones.

Data in this project

Drop data files here or browse for files to upload

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Projects / ISP Churn Prediction Model

Overview Assets Jobs Manage

Find assets

Import assets

New asset

1 assets

All assets

Name	Last modified
internet_service_churn_csv_sample_shaped.csv	Now
CSV	Modified by you

Asset types

Data

Data in this project

Drop data files here or browse for files to upload

internet\_service\_churn\_csv\_sample\_...

Uploaded!

Dismiss

<https://jp-tok.dataplatform.cloud.ibm.com/projects/23e8f33d-f29a-475c-ac84-fb96eab05683...>

## Step:03

Then click the 3dots in the dataset and click prepare data than save it to create a data refine flow

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Projects / ISP Churn Prediction Model / internet\_service\_churn\_csv\_sam... / Data Refinery

Steps (1)

Use a code template to add a step

Data source: internet\_service\_churn\_csv\_sample\_shaped.csv

1. Convert column type

Automatically converted one or more columns to inferred data types. Strings that are converted to decimal use a dot (.) for the decimal symbol.

Auto-generated

New step

	Data	Profile	Visualizations
	id	is_tv_subsc...	is_movie...
	Integer	Integer	Integer
1	15	1	0
2	23	1	0
3	56	1	1
4	71	0	0
5	166	1	1
6	174	1	1
7	270	0	0
8	288	1	1
9	291	1	0
10	507	1	1
11	682	1	0
12	861	1	0
13	977	1	1
14	1075	1	1
15	1266	1	1
16	1296	1	0
17	1492	1	1

Full data set: 3509 rows, 11 columns

Configure

Viewing: 3509 rows, 11 columns

About this asset

Name: internet\_service\_churn\_csv\_sample\_shaped.csv

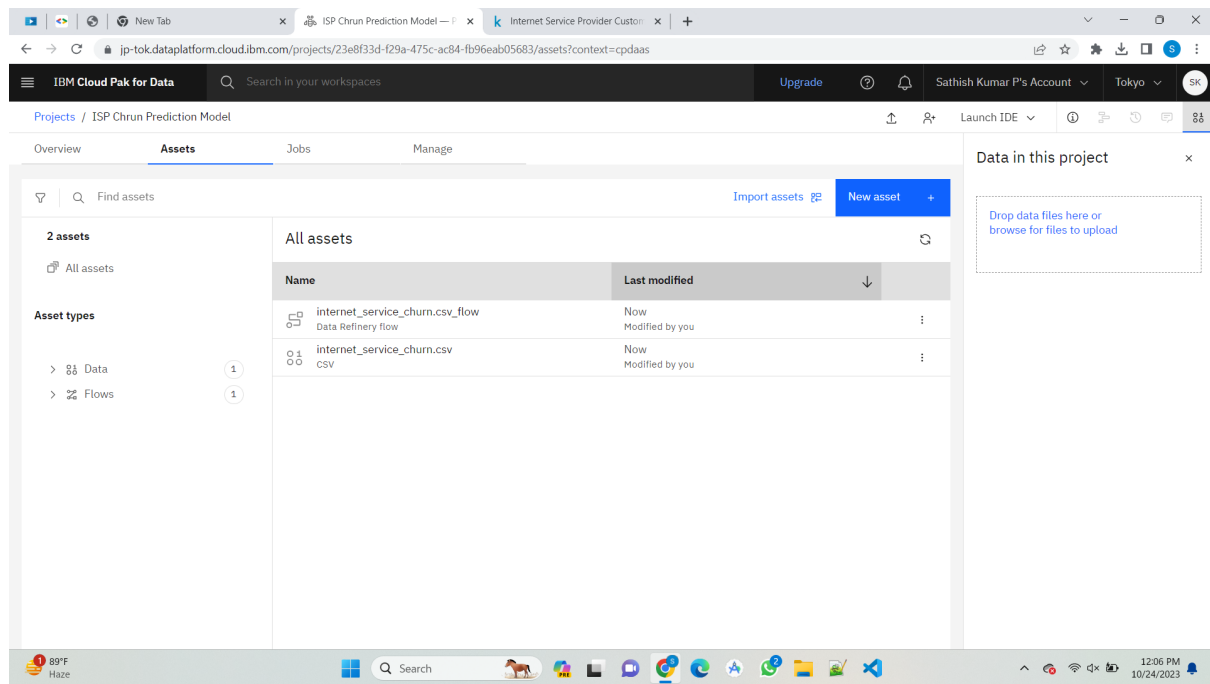
Description: What is the purpose of this Data Refinery flow?

Asset details: Steps: 1

Associated assets: Source: internet\_service\_churn\_csv\_..., Target: internet\_service\_churn\_csv\_...

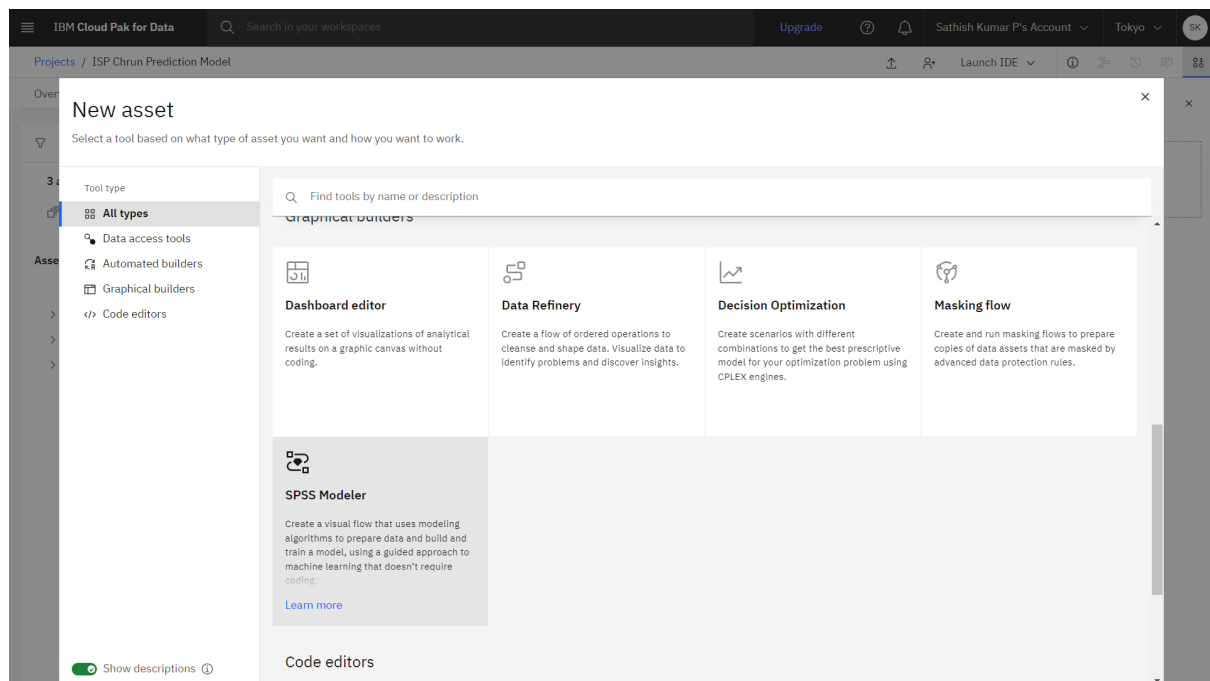
Last modified: Not yet saved

Created on: Not yet saved

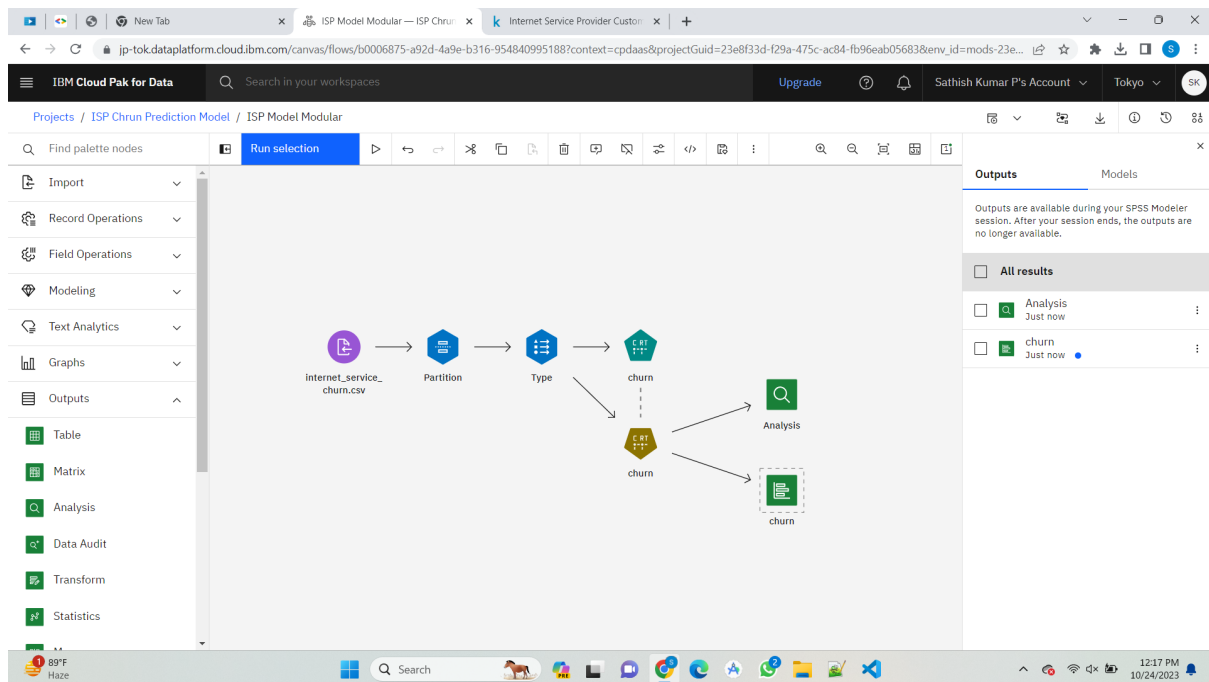


## Step:04

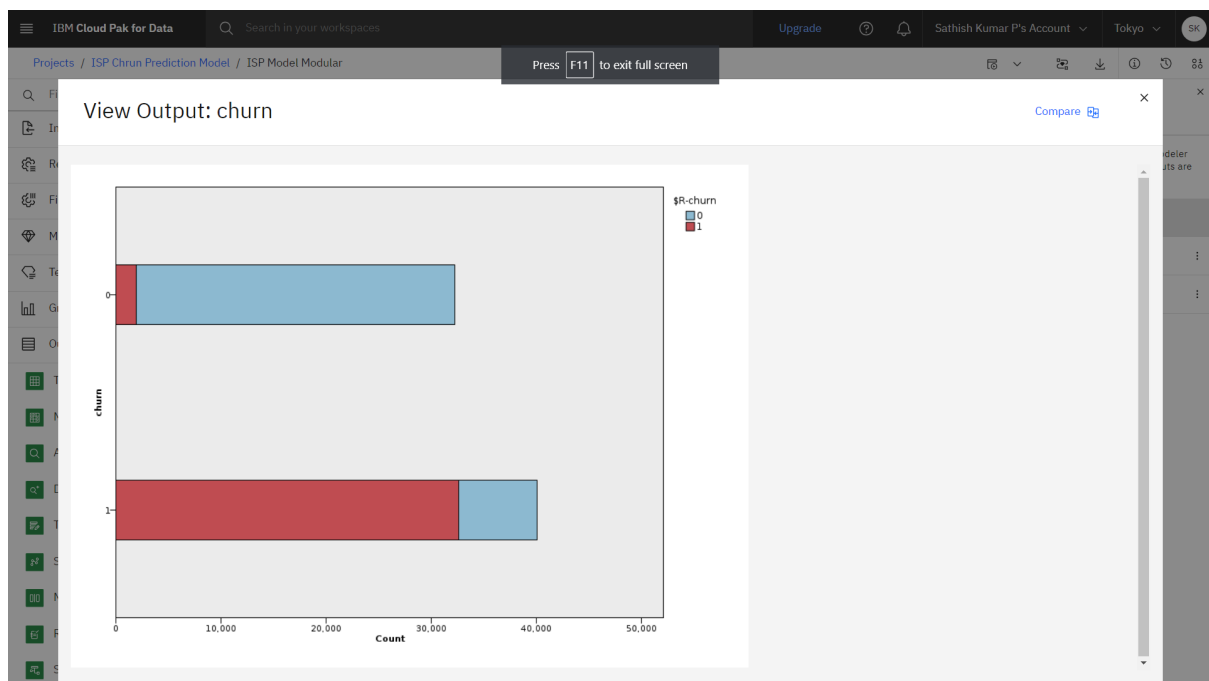
Then To Create a model we can either use Auto Ai or SPSS Modular Flow Or using Python we are going to use SPSS Modular flow



It is the representation of the model flow



Below image has a distribution graph 0 and 1 (False & True)



**Step:05**

We have to Save the model to be created

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Projects / ISP Churn Prediction Model

Launch IDE

Overview

Assets

Jobs

Manage

Find assets

Import assets

New asset

4 assets

All assets

Asset types

Data

Flows

Models

All assets

Name	Last modified
ISP Model Modular SPSS Modeler flow	5 hours ago Modified by you
ISP Customer Churn Model Model	5 hours ago Modified by you
internet_service_churn.csv_flow Data Refinery flow	6 hours ago Modified by you
internet_service_churn.csv CSV	6 hours ago Modified by you

Data in this project

Drop data files here or  
browse for files to upload

## Conclusion:

Until now we have created a ML model for ISP churn model. There are only few more steps to fully complete our project. This is all we done in this phase of development of our project