

## Lab 1 - Train a Classification Model in Python using scikit-learn

In this lab, the students will train a classification model using Python in an Azure Notebook. The model will predict what type of bicycle a customer is most likely to buy. Some exploratory data analysis and feature engineering will be required.

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### Take away - Train a Model in Azure Notebook

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#### Objectives:

In this lab, you will:

- Use Azure Notebook with Python, a cloud based Jupyter Notebook service.
- Perform exploratory data analysis
- Create machine learning model features.
- Train an open source based classification predictive model.

The main goal of this lab is to get students up to speed using Azure Notebooks while getting them started on the Adventure Works use case.

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#### Introduction:

You're going to train a classification model in an Azure Notebook using Python and the open source package scikit-learn. As part of that you will need to perform some basic exploratory data analysis to understand the data. Then you will need to create features to be used in model training. Finally, you will train and evaluate your model. Note: At this point, you will not be using Azure services.

#### Resources:

You will use the following files from the lab folder:

Name	Description
Starter_Lab1_Notebook.ipynb	The lab notebook you should use. Import this into your Notebook project and open it.
AWBikeSales.csv	Adventure Works Bike Sales data extract file. Upload this file to your Azure Notebook project.

**Prerequisites:**

Before you can do this lab, you need to have signed up for the free Azure Notebook Service.