**Title: Introduction to Machine Learning**

6 hours/day. October 29-30

**Course Details:**

This two-day virtual Zoom workshop provides an introduction to basic concepts of machine learning. We will introduce popular machine learning models and some most recent development in Artificial Intelligence and Machine Learning. Audiences will utilize the Scikit-learn Machine Learning library to analyze data and generate predictions. No prior knowledge of machine learning is required. However, having some fundamental knowledge of Python programming is preferable for participants. All disciplines welcome.

**Any software being used：**

We will use Google Colab. It runs over a web browser (Chrome, MS Edge, MS Web Explorer, or Safari). Every user must have a Google account. No additional software is required.

**Topics to be covered**

* History and classifications of AI and Machine Learning.
* Introduction to Machine learning algorithms including Linear Regression, Logistic Regression, Artificial Neural Network, Support Vector Machines, Decision Tree, and deep learning models.
* Machine Learning concepts such as underfitting, overfitting, training, testing, and validation.
* Machine learning model evaluation.

**Data science techniques that will be learned**

* Machine Learning Concepts.
* Scikit-learn machine learning packages.
* Data importing.
* Data Preprocessing.
* Results Interpretation.

**Any key learning outcomes or skills taught**

* Import data from local and remote data source.
* Analyze attributes of data and preprocessing data.
* Using Scikit-learn to write code to run machine learning models.

**Who the target audience is (by discipline or functional area)**

Any disciplines

**Any pre-requisites or prior knowledge that is needed**

Basic knowledge of Python.

**Level of workshop**

Beginner