PYTHON 101

INTRODUCTION TO PYTHON PROGRAMMING 1

WHAT YOU WILL LEARN TODAY

- Reasons why you should consider machine learning
- Introducing python as a programming language for machine learning
- Step by step guide on creating a google colaboratory account
- Exploring the google colaboratory environment
- Introducing the world of programming

WHY STUDY MACHINE LEARNING (ML) ?

- ML is the backbone for the future of AI
- ML is a core skill for data driven careers
- ML is a predictive tool that learn patterns from data and forecast the future outcomes
- ML give room for optimization and management of resources
- ML close critical gaps in human race
- ML is flexible,powerful and python friendly

PYTHON AS A PROGRAMMING LANGUAGE FOR MACHINE LEARNING

It is now common among AI and machine learning engineers to build and write programs in Python. This choice of programming has been proven to be the most flexible and easy-to-understand way of interacting with the computer. It is known as a high-level language. This language is mostly used in this field based on some of its characteristics such as:

- Large community and support
- Rich Ecosystem of libraries
- Easy integration during deployment
- Easy to learn, use, and teach

STEP-BY-STEP GUIDE ON CREATING A GOOGLE COLABORATORY ACCOUNT

- STEP 1 : Make or confirm for an existing google account (g-mail)

- STEP 2 : Open google colab by entering "*colab.research.google.com*" on your browser.
  (If you're not signed in, click *Sign in* (top right) and use your Google account)

- STEP 3 : Creating a new notebook
  (Clicking on the "*New Notebook*" button from colab homepage) OR
  (Click on "*File*" ⟹ "*New Notebook in Drive*")

Exploring the Google colaboratory Environment

- Menu Bar
  - File ⟹ Creating/Opening/Uploading/Saving/Downloading and Printing Notebooks.
  - Edit ⟹ Undo/Redo Actions, Select/Cut/Copy/Paste Cells, Finding keywords.
  - View ⟹ Table of contents, Notebook info, Executed code history, and Creating Slideshows.
  - Insert ⟹ Code/Text/Section Header.
  - Runtime ⟹ Cells, Sessions, and Changing Runtime.
  - Tools ⟹ Keyboard ShortCuts, Settings, Command Pallete.
  - Help ⟹ Report a bug, frequently asked questions.

- Side Panel
  - Table of Contents
  - Find and Replace
  - Code Snippets
  - Secrets
  - Files

INTRODUCING THE WORLD OF PROGRAMMING

Imagine you have two buckets:

Bucket A → filled with water

Bucket B → filled with oil

Now you want to wash your cloths.

Suggest 2 Possible ways of Acomplishing these task....

The Programming Lesson

This scenario is exactly what programming is about:

- Identify the problem (I want to wash the cloth).
- Check what you have (resources: two buckets, one with water, one oil).
- Think of different solutions (reuse, replace, combine, or expand).
- Choose the most efficient solution (use the water bucket directly if that's enough)

Wish To See You Soon, And Until then
ENJOY MACHINE LEARNING !!!