Introduction to EDA

Why Google Colab?

During this course, you have utilized **jupyter notebooks** on your local computer to explore datasets and build machine learning models. However, working with large datasets can pose challenges due to the substantial allocation of system resources required for computations, often resulting in system slowdowns. It is advisable to leverage online resources like **Google Colab**, which offers the necessary computational power for complex tasks to avoid such situations. In this lecture series, we will use Google Colab for dataset analysis. Please familiarize yourself with Google Colab by referring to this document, which explores various shortcuts and helpful tricks when working with Colab notebooks.

Useful Shortcuts

Usage	Keyboard Shortcut
Show Help	*cmd/ctrl + m + h*
Undo last action (inside a cell)	*cmd/ctrl + m + z*
Find and replace	*cmd/ctrl + m + h*
Insert code cell above	*cmd/ctrl + m + a*
Insert code cell below	*cmd/ctrl + m + b*
Delete cell	*cmd/ctrl + m + d*
Select all cells	*cmd/ctrl + shift + a*
Run all cells	*cmd/ctrl + F9*

Run the selected cell	*cmd/ctrl + enter*
Interrupt Execution	*cmd/ctrl + m + i*

Mount Google Drive on Colab

A limitation of using Google Colab is that uploaded datasets or resources are deleted once the session ends. Consequently, you must re-upload these resources each time you rerun the notebook. You can attach your Google Drive to the Colab notebook to overcome this inconvenience. By doing so, you only need to upload the resources once to your Drive, and they can be accessed repeatedly when running the notebook on Colab. The process of attaching Google Drive to Colab is referred to as **mounting**.

To mount Google Drive on Colab, you can use the following command:

```python
# Import the drive class present in google.colab package
from google.colab import drive

# Use the mount method, which takes the path at which the drive needs to
be mounted as a parameter
drive.mount('/content/gdrive')
```

Executing this command will prompt you to authenticate and authorize the connection to your Google Drive. Once successfully mounted, you can access and utilize your Drive's resources within the Colab notebook without the need for repetitive uploads. You can now access your Google Drive files under: **/content/gdrive/My Drive/**

Additional Resources

You can go through various resources to learn more about Google Colab.
1. [Overview of Colaboratory Features](#)
2. [Markdown Guide](#)
3. [Snippets: Importing libraries](#)
4. [Using Google Colab with GitHub](#)
5. [External data: Local Files, Drive, Sheets, and Cloud Storage](#)