DATA VISUALIZATION — **EDU-BOOST**

Lesson — Introduction

DATA VISUALIZATION WITH PYTHON 3.X

Tutor — MR. Huynh Nam

Time — 10 mins

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Thinking

DATA → INFORMATION → KNOWLEDGE → UNDERSTANDING

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Objective

• Understanding Data Visualization
• How to set up Python Environment

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Content

• Introduction to Data Visualization
• Anaconda 3 and Spyder plugin for Python 3.x

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Introduction to Data Visualization

- Visualization: converting raw data to a form that is viewable and understandable to humans.
- Scientific visualization: specifically concerned with data that has a well-defined representation in 2D or 3D space (e.g., from simulation mesh or scanner).
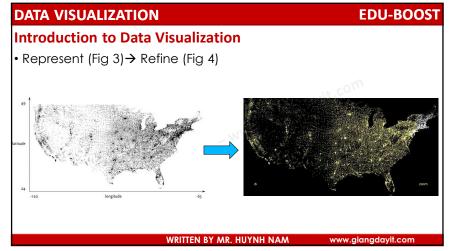
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Introduction to Data Visualization

- Information visualization: concerned with data that does not have a well-defined representation in 2D or 3D space (i.e., "abstract data").

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Introduction to Data Visualization

- Network visualization (Fig 1)

- Circle chart (Fig 2)

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Introduction to Data Visualization

- Represent (Fig 3)→ Refine (Fig 4)

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Anaconda 3

- Conda is a powerful package manager and environment manager that you use with command line commands at the Anaconda Prompt for Windows, or in a Terminal window for macOS or Linux.
- Some tools
  - Managing conda:
    - Verify that conda is installed and running on your system by typing: *conda –version*
    - Update conda to the current version. Type the following: *conda update conda*
  - Managing Environments
  - Managing Python
  - Managing packages
- See more: https://conda.io/docs/user-guide/install/index.html

ANACONDA

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Spyder Plugin

- Spyder, the Scientific Python Development Environment, is a free integrated development environment (IDE) that is included with Anaconda. It includes editing, interactive testing, debugging and introspection features.
- To install this package with conda run:
  - *conda install -c anaconda spyder*
- After you have installed Anaconda, start Spyder on Windows, macOS or Linux by running the command *spyder*
- See more: https://anaconda.org/anaconda/spyder

spyder

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Data Visualization with Python

- Python is powerful to visualize data in sciencific and bussiness
- Popular data visualisation libraries in Python are Matplotlib, Seaborn, ggplot, plotly, bokeh, Dash, Leather, Altair, among others.
- Python gives a lot of options to visualize data, it is important to identify the method best suited to your needs from basic plotting to sophisticated and complicated statistical charts, and others.
- It may also depend on functionalities such as generating vector and interactive files to flexibility offered by these.

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THANK YOU

Q & A

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