# ISA 401/501 - Business Intelligence & Data Viz
16: An Overview of Data Viz Software (Tableau, R & Python)

Learning Objectives for Today's Lab:

(A) Create your first visualizations, dashboard and story map in **Tableau**.

(B) Create a virtual environment, install libraries and capitalize on the pandas-profiling and pycaret **Python** libraries for visualizing machine learning problems (exploration and post model diagnostics).

(C) Create exploratory plots for machine learning problems in **R**.

(D) If time allows, discuss the grammar of graphics and its implementation in R and Python via the ggplot2 and plotnine libraries, respectively.

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1. (0 points) We will begin today's class with a quick discussion of Assignment 11 and then, compete in a **Kahoot Competition on the Fundamentals of Data Visualization** for a $15 Starbucks gift card.

2. (0 points) Let us use **Tableau** to examine Ohio's Summary Data for COVID-19 deaths (see https://coronavirus. ohio.gov/static/dashboards/COVIDDeathData_CountyOfDeath.csv). In Tableau, let us:

   (A) Create a map of the sum of measure counts by county, with a filter of different measures.
   (B) Create a line-chart (as well as a time-based bar chart) for the sum of case counts for the entire state.
   (C) We will then combine these two charts in a dashboard.
   (D) We will also use the storyboard feature to highlight interesting aspects of the data.
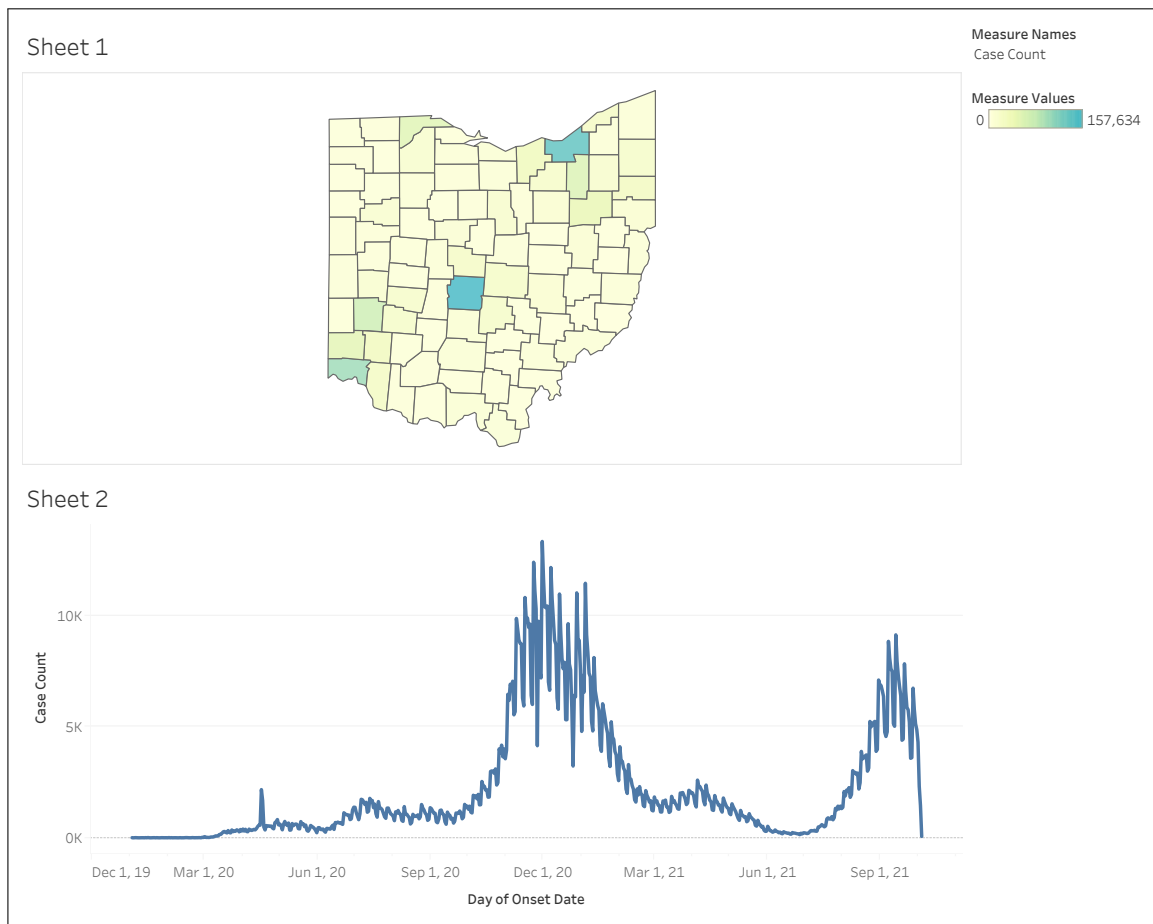
3. (0 points) Let us use both R and Python to quickly examine the portmap_sampled.csv. The goal of using both R and Python is to expose you to libraries that allow for quick visualizations for the purpose of data exploration. **Recall that** visualizations should serve a specific purpose as highlighted in Slide 6 of Class 13.

4. (0 points) If we were to discuss the grammar of graphics, the visualization below is helpful. The ENGE LAB: ggplot2 is an excellent introductory reference on the topic.