Your grade: 100%

Your latest: **100%** • Your highest: **100%** • To pass you need at least 73%. We keep your highest score.

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1. Which of the following statements accurately describes the importance of Data Visualization?   **1 / 1 point**

○ Data Visualization is only useful for simple datasets and doesn't provide any added value for complex data.

○ Data Visualization primarily serves aesthetic purposes and doesn't significantly impact data analysis.

◉ Data Visualization enables us to communicate insights and findings to stakeholders in a more compelling and understandable way

○ The primary function of Data Visualization is to complicate data analysis processes rather than simplify them.

> ⊘ **Correct**
> Correct! Data Visualization enables us to communicate insights and findings to stakeholders in a more compelling and understandable way.

2. Which layer within the Matplotlib architecture generates graphics and plots quickly and easily?   **1 / 1 point**

○ Backend Layer

○ FigureCanvas

◉ Scripting Layer

○ Figure Layer

> ⊘ **Correct**
> Correct! The scripting layer is the appropriate layer for everyday purposes. It is considered a lighter scripting interface to simplify common tasks and for a quick and easy generation of graphics and plots.

3. Complete the following sentence: Spotify's data visualization tool, Spotify Pie, allows users to create customized_____   **1 / 1 point**

○ Scatter plots

○ Bar graphs

◉ Pie charts

○ Line graphs

> ⊘ **Correct**
> Correct! Spotify uses Spotify Pie which enables users to create customized pie charts based on their listening habits on Spotify.

4. Using Matplotlib magic functions which code starts the command?   **1 / 1 point**

○ Smatplotlib outline

○ %matplotlib jupyter-notebook

◉ %matplotlib inline

○ %matplotlib

> ⊘ **Correct**
> Correct! The command "%matplotlib inline", is used to generate plots within the browser and it is one of the Matplotlib backends. A sign of a magic function is that it starts with "%matplotlib."

5. Area plots are particularly effective in depicting data of what nature?   **1 / 1 point**

○ Continuous dataset

○ Metadata

○ Numerical data

◉ Population demographics

> ⊘ **Correct**

6. What type of chart is similar to a histogram and is commonly used to compare the values of a variable at a given point in time?

1 / 1 point

○ Radial column chart

● Bar chart

○ Pie chart

○ Table chart

⊘ **Correct**
Correct! A bar chart is a type of plot in which the length of each bar is proportional to the value of the item it represents. It compares the values of a variable at a given point in time.

7. Which library must you import to work with tabular data in Matplotlib?

1 / 1 point

○ Subplot

● Pandas

○ Matplotlib. pyplot

○ NumPy

⊘ **Correct**
Correct! Matplotlib is a general-purpose comprehensive plotting library that provides a flexible interface for creating a wide range of plots. To work with tabular data in Matplotlib, you need to import Pandas.

8. Where can Waffle Charts be applied?

1 / 1 point

○ Social media analysis

○ Customer feedback analysis

● Budget allocation

○ Market research

⊘ **Correct**
Correct! You can use waffle charts to demonstrate the allocation of budgetary resources across categories or departments within an organization.

9. Which specialized plot type in Seaborn is useful for data and modeling relationships? **[Select two]**

1 / 1 point

☐ Pie plot

☑ Categorical plot

⊘ **Correct**
Correct! Seaborn provides specialized plot types such as regression, distribution, and categorical plots that are particularly useful for analyzing data and modeling relationships.

☐ Bar plot

☑ Regression plot

⊘ **Correct**
Correct! Seaborn provides specialized plot types such as regression, distribution, and categorical plots that are particularly useful for analyzing data and modeling relationships.

10. Which Folium Map style is great for visualizing and exploring river meanders and coastal zones?

1 / 1 point

○ Stamen terrain

○ Street-level map

● Stamen toner

○ Open street map

⊘ **Correct**
Correct! Folium allows you to create different map styles using the tiles parameter. One of the map styles is Stamen Toner. It is great for visualizing and exploring river meanders and coastal zones.

11. What feature enhances interactivity and provides contextual information to maps?

1 / 1 point

○ Zoom function

○ Longitude

○ Latitude

◉ Markers

> ⊘ **Correct**
>
> Correct! Markers represent specific locations or points of interest, providing additional information when clicked. Markers are like signposts that guide us through the map, highlighting essential elements.

12. Which tool is the Python framework for building web analytic applications?   **1 / 1 point**

◉ Dash

○ Panel

○ Streamlit

○ Voilà

> ⊘ **Correct**
>
> Correct! The Python framework Dash creates web analytics applications. It is designed for creating data visualization apps with highly customized user interfaces. It builds on top of Flask, Plotly.js, and React.js.

13. What is the key difference between Plotly Graph Objects and Plotly Express?   **1 / 1 point**

○ Plotly Graph Objects is a high-level wrapper, while Plotly Express is a low-level interface.

○ Plotly Graph Objects provides a simpler syntax, while Plotly Express offers more customization options.

◉ Plotly Graph Objects requires fewer commands, while Plotly Express automatically generates layout and figure objects.

○ Plotly Graph Objects focuses on 3-dimensional data, while Plotly Express focuses on statistical analysis.

> ⊘ **Correct**
>
> Correct! Plotly Graph Objects is a low-level interface and requires fewer commands to create figures, while Plotly Express is a high-level wrapper that automatically generates layout and figure objects.

14. What does the @app.callback decorator tell Dash when used in a Callback function?   **1 / 1 point**

◉ It tells that the function is automatically called by Dash whenever an input component's property changes.

○ It tells you to connect the input and output components to the desired properties.

○ It tells you to provide the title to the dash app.

○ It tells output component children in the application layout.

> ⊘ **Correct**
>
> Correct! A Callback function is automatically called by Dash whenever an input component's property changes.

15. What type of interface does Dash have?   **1 / 1 point**

○ Data-based

◉ Open source

○ Closed source

○ Code-based

> ⊘ **Correct**
>
> Correct! Dash is an Open-Source User Interface Python library for creating reactive, web-based applications. It is enterprise-ready and a first-class member of Plotly's open-source tools.