Short Questions

1. What is Altair's declarative API?
2. How do you create an Altair Chart and Plot?
3. Can you explain how to change mark/plot types in Altair?
4. What is the purpose of global configuration in Altair?
5. What are encoding arguments in Altair?
6. How does Altair handle different data types in its encoding?
7. Explain the process of creating titles in Altair visualizations.
8. What are properties in the context of Altair charts?
9. How can tooltips be implemented in Altair charts?
10. What options are available for saving Altair charts?
11. How can you make plots interactive in Altair?
12. Can you provide some examples of visualizations created using Altair?
13. What advantages does Altair offer compared to other visualization libraries?
14. How does Altair handle missing data in visualizations?
15. Explain the role of data transformation in Altair visualizations.
16. How does Altair support the customization of axes and legends?
17. What are the different types of scales available in Altair?
18. How does Altair handle categorical data in visualizations?
19. Can you explain the concept of facet plots in Altair?
20. How does Altair handle datetime data?
21. What are the best practices for designing effective Altair visualizations?
22. How does Altair handle large datasets?
23. Explain the concept of layering in Altair visualizations.
24. How does Altair support interaction with selections?
25. What role do themes play in Altair visualizations?
26. Themes in Altair allow users to quickly change the visual appearance of plots by specifying pre-defined What is Plotly and how does it utilize JSON?
27. Explain the difference between online and offline plotting in Plotly.
28. Describe the structure of a Plotly plot.
29. How does Plotly utilize dictionaries in its operations?
30. Compare and contrast Graph Objectives and Dictionaries in Plotly.
31. What is Plotly Express and what are its advantages?
32. How can you update plots in Plotly? Provide examples of adding and updating traces.
33. Explain the process of creating subplots in Plotly.

34. What are dropdown menus in the context of Plotly plots? How are they implemented?
35. Describe the interactivity features offered by Dash in Plotly.
36. Provide examples of different types of Plotly plots.
37. How does Plotly handle real-time data visualization?
38. Discuss the integration of Plotly with other Python libraries such as Pandas and NumPy.
39. Explain how animations are implemented in Plotly plots.
40. What are the advantages of using Plotly for data visualization compared to other libraries?
41. How does Plotly support 3D plotting?
42. Discuss the role of Plotly in creating interactive dashboards.
43. Explain the concept of figure factories in Plotly.
44. How does Plotly handle large datasets efficiently?
45. Discuss the role of Plotly in data storytelling.
46. What are some common customization options available for Plotly plots?
47. Explain the process of exporting Plotly plots to various formats such as PNG or PDF.
48. How does Plotly support geographical plotting?
49. Discuss the role of Plotly in statistical data analysis.
50. How does Plotly handle missing or incomplete data?
51. Describe the process of embedding Plotly plots in web applications.
52. Explain how Plotly handles streaming data.
53. Discuss the role of Plotly in machine learning model evaluation.
54. What are some best practices for designing effective Plotly visualizations?
55. Describe the process of sharing Plotly plots with others.
56. How does Plotly handle categorical data in plots?
57. Explain the concept of Plotly themes and templates.
58. Discuss the role of Plotly in time-series analysis.
59. How does Plotly support customization of axis properties?
60. Describe the process of creating custom annotations in Plotly plots.
61. Discuss the role of Plotly in sentiment analysis visualization.
62. How does Plotly handle data aggregation and summarization?
63. Explain the concept of Plotly callbacks.
64. Discuss the role of Plotly in exploratory data analysis (EDA).
65. How does Plotly handle outliers in data visualization?
66. Describe the process of creating heatmaps in Plotly.
67. Discuss the role of Plotly in visualizing network data.

68. How does Plotly handle hierarchical data visualization?
69. Explain the concept of Plotly animations and transitions.
70. Discuss the role of Plotly in creating custom dashboards.
71. How does Plotly handle interactive data selection?
72. Describe the process of creating custom color scales in Plotly.
73. Discuss the role of Plotly in geospatial data visualization.
74. How does Plotly support the creation of publication-ready plots?
75. Explain the concept of Plotly offline mode and its advantages.
76. What is the concept of "Grammar of Graphics" in CGPlot2/Plotnine?
77. How do you create plots using CGPlot2/Plotnine?
78. What are geoms in CGPlot2/Plotnine, and how can you change them?
79. How does CGPlot2/Plotnine incorporate statistical transformations into plots?
80. Explain the concept of faceting in CGPlot2/Plotnine.
81. What role do coordinates play in CGPlot2/Plotnine?
82. How can you add annotations to plots in CGPlot2/Plotnine?
83. Describe the process of scaling in CGPlot2/Plotnine.
84. What are themes in CGPlot2/Plotnine, and how do they affect plot appearance?
85. Explain the purpose of legends in CGPlot2/Plotnine.
86. How can you customize legends in CGPlot2/Plotnine?
87. What is the significance of palettes in CGPlot2/Plotnine?
88. Can you provide examples of different visualization techniques using CGPlot2/Plotnine?
What are some common data visualization pitfalls, and how does CGPlot2/Plotnine address them?
90. How does CGPlot2/Plotnine handle missing data in plots?
91. Discuss the concept of layering in CGPlot2/Plotnine.
92. How can you adjust the transparency of elements in a plot using CGPlot2/Plotnine?
93. What are some ways to customize axis labels and titles in CGPlot2/Plotnine?
94. Explain the concept of jittering in CGPlot2/Plotnine.
95. How does CGPlot2/Plotnine handle categorical data in plots?
96. Describe the process of adding trend lines to plots in CGPlot2/Plotnine.
97. What are some common statistical transformations used in CGPlot2/Plotnine?
98. How can you create interactive plots using CGPlot2/Plotnine?

99. Discuss the importance of data exploration in the context of CGPlot2/Plotnine.
100. What are some best practices for creating effective visualizations using CGPlot2/Plotnine?
101 How does CGPlot2/Plotnine handle different types of data (e.g., numerical, categorical) in plots?
102. Explain the concept of facet_wrap versus facet_grid in CGPlot2/Plotnine.
103. How can you customize the appearance of gridlines in CGPlot2/Plotnine?
104. Describe the process of creating composite plots (multiple plots in one figure) in CGPlot2/Plotnine.
105. What are some techniques for improving plot readability in CGPlot2/Plotnine?
106. How does CGPlot2/Plotnine handle outliers in data visualization?
107. Discuss the advantages of using CGPlot2/Plotnine over other plotting libraries.
108. How can you incorporate custom fonts into CGPlot2/Plotnine plots?
109. Describe the process of saving plots as image files using CGPlot2/Plotnine.
110. What are some common ways to handle overplotting in CGPlot2/Plotnine?
111. How does CGPlot2/Plotnine handle time series data visualization?
112. Explain the concept of statistical summaries in CGPlot2/Plotnine.
113. How can you create animated plots using CGPlot2/Plotnine?
114. Discuss the role of color in data visualization and how it's handled in CGPlot2/Plotnine.
115. What are some strategies for effectively visualizing high-dimensional data using CGPlot2/Plotnine?
116. Describe the process of creating interactive tooltips in CGPlot2/Plotnine.
117. How does CGPlot2/Plotnine handle different types of plot scales (e.g., linear, logarithmic)?
118. Explain the concept of "layering" in CGPlot2/Plotnine and provide examples.
119. How can you customize the appearance of gridlines in CGPlot2/Plotnine?
120. What are some techniques for effectively labeling data points in CGPlot2/Plotnine?
121. Discuss the concept of "plot theming" in CGPlot2/Plotnine and how it's used.
122. How does CGPlot2/Plotnine handle missing or incomplete data when creating plots?

123. What are some common challenges when visualizing large datasets, and how does CGPlot2/Plotnine address them?
124. Explain how statistical transformations are applied in CGPlot2/Plotnine and provide examples.
125. How can you create interactive plots with CGPlot2/Plotnine, and what are some interactive features that can be included?