# Declaration of Academic Integrity

Academic Integrity is a central tenet of Singapore Polytechnic. The polytechnic rules state that "Cheating in examinations and other assessed work is a very serious offence. This includes copying and using plagiarised material. Any student who cheats, attempts to cheat or breaches any rules for examinations and tests will face disciplinary action. The student is liable to be expelled."

Check **only one** of the two options below:

I affirm that the work I submit is my own, produced without help from any AI tool(s) and/or other source(s).

I affirm that the work I submit has been produced with the use of AI tool(s) and/or other source(s) which I have acknowledged fully in the [following section](#_Acknowledgement_of_use).

By signing this form, I declare that the above affirmation made is true, and that I have read and understood the rules stated in Students Handbook on “[Plagiarism](https://www.sp.edu.sg/sp/student-services/osc-overview/student-handbook/intellectual-property-copyright-and-plagiarism)” and “[Breach of Examination/Assessment Rules](https://www.sp.edu.sg/sp/student-services/osc-overview/student-handbook/conduct-in-examinations-breach-of-exam-rules)”.

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| Signature: | Date:  3/8/2024 | |

## Acknowledgement of use of AI tool(s) and/or other source(s) (where applicable)

### AI tool(s)

|  |  |
| --- | --- |
| **Name of AI tool** | chatgpt |
| **Input prompt** | Palattes in plotly |
| **Date generated** | *1/8/2024* |
| **Output generated** | Plotly offers a variety of color palettes and options for customizing the colors in visualizations. Here are the key points about color palettes in Plotly:   1. Built-in qualitative color sequences: Plotly provides several built-in qualitative color sequences that can be accessed through the px.colors.qualitative module. Some examples include:  * Plotly * D3 * G10 * T10 * Alphabet * Dark24 * Light24   These can be used for discrete color mapping, for example:  python  **import** plotly.express **as** px  fig = px.scatter(df, x="x", y="y", color="category",  color\_discrete\_sequence=px.colors.qualitative.G10)   1. Built-in sequential and diverging color scales: For continuous color mapping, Plotly offers sequential and diverging color scales accessed via px.colors.sequential and px.colors.diverging. Some examples:  * Viridis * Plasma * Inferno * RdBu * Spectral   These can be used like:  python  fig = px.scatter(df, x="x", y="y", color="value",  color\_continuous\_scale=px.colors.sequential.Viridis)   1. Custom color scales: You can create custom color scales by specifying a list of colors:   python  custom\_scale = ["#636EFA", "#EF553B", "#00CC96", "#AB63FA", "#FFA15A"]  fig = px.scatter(df, x="x", y="y", color="value",  color\_continuous\_scale=custom\_scale)   1. Named color scales: Many color scales can be specified by name as a string:   python  fig = px.scatter(df, x="x", y="y", color="value",  color\_continuous\_scale='Inferno')   1. Discrete color mapping: For categorical variables, you can explicitly map categories to colors:   python  color\_map = {"A": "red", "B": "green", "C": "blue"}  fig = px.scatter(df, x="x", y="y", color="category",  color\_discrete\_map=color\_map)   1. Colorway in templates: The default color sequence comes from the active template's layout.colorway attribute. You can modify this to change the default colors used.   When working with Plotly Express, the key arguments for specifying colors are:   * color\_discrete\_sequence: For categorical variables * color\_continuous\_scale: For continuous variables * color\_discrete\_map: For explicit category-to-color mapping   By utilizing these options, you can customize t |
| **Impact on submission** | Help me understand what pallates there are and which to use |

### Other source(s)

|  |  |
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| **Source** | **Impact on submission** |
| < *Link to online source* > | < *Briefly explain which part of your submitted work the online source was applied* > |
| < *Author, Book / Article / Journal, Year, Pages* > | < *Briefly explain which part of your submitted work the Book / Article / Journal was applied* > |
| < *Student / Person name* > | < *Briefly explain which part of your submitted work the help of another student / person was applied* > |
| < *Others* > | < *Briefly explain which part of your submitted work the source was applied* > |