

1. Conditional / Column Formatting

- *“Highlight all rows where species is Adelie.”*
 - *“Add data bars to the bill_length_mm column.”*
 - *“Color the island column with a different color for each unique island.”*
 - *“Highlight cells in the sex column that are blank or missing.”*
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2. Calculated Columns

- *“Add a calculated column called bill_area as bill_length_mm × bill_depth_mm.”*
 - *“Create a new column body_mass_kg by dividing body_mass_g by 1000.”*
 - *“Add a new column called SizeCategory that classifies penguins as ‘Light’, ‘Medium’, or ‘Heavy’ based on body_mass_g.”*
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3. PivotTables & Charts

- *“Insert a PivotTable showing average body_mass_g by species.”*
 - *“Create a PivotChart comparing body mass by species and sex.”*
 - *“Build a PivotTable showing average flipper_length_mm by island, then make a bar chart from it.”*
 - *“Make a line chart showing the average bill_length_mm by year for each species.”*
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4. Advanced Analysis with Python

- *“Use Python to create a scatter plot of bill_length_mm vs bill_depth_mm colored by species.”*
- *“Run a correlation analysis between body_mass_g, flipper_length_mm, and bill_length_mm.”*
- *“Cluster the penguins into 3 groups based on their numeric measurements and show the results in a plot.”*
- *“Fit a simple linear regression to predict body_mass_g from bill_length_mm and flipper_length_mm.”*