

Assignment 3 – Visualization Rubric

General Expectations (apply across all items):

- Code runs without errors; plots render.
- Proper axis labels, titles, and legends.
- Appropriate ggplot2 geoms/mappings.
- Consistent diagnosis coloring.
- Minor deductions (max -0.5 overall): missing labels (-0.1 each), unreadable text (-0.1), wrong variable names (-0.1 each), non-reproducible code (-0.2).

Question	Criteria	Points
1. Aesthetics in ggplot() vs geom	Explains inheritance/overrides; example with global aes() and layer-specific aesthetics. Partial: correct idea but vague/incorrect example. Mentions redundancy but confused. Missing/incorrect.	0.5
2. Bar plot vs Histogram	Correct difference (categorical vs continuous) + histogram chosen for heights with rationale. Partial: histogram chosen but weak reasoning. Incorrect choice or rationale.	0.5
3a. Mean radius by Diagnosis	Justification (continuous across groups → violin/boxplot). Correct plot with labels/titles. Correct plot but weak justification/labels. Suboptimal plot (e.g., bar with means) with justification. Wrong plot/missing.	1.0
3b. Smoothness vs Compactness	Justification (two continuous vars → scatter). Correct scatter plot with labels. Correct plot, thin justification/minor issues. Less appropriate plot (e.g., hexbin) or missing labels.	1.0

	Wrong/missing.	
3c. Violin plots (radius + texture by Diagnosis, faceted)	<p>Data wrangled long. Correct violin + facet_wrap. Labels included.</p> <p>Plot correct but wrangling incomplete/minor labeling issues.</p> <p>Facets attempted but wrong format/mapping.</p> <p>Wrong geom, no facets but some attempt.</p> <p>Missing/incorrect.</p>	1.5
3d. 9-panel histograms of mean features	<p>Data wrangled long. 9 histograms faceted by feature, colored by Diagnosis, scales=free_x.</p> <p>Small miss (e.g., 8/9 vars or forgot free_x).</p> <p>Facets present but wrong geom/missing colors.</p> <p>Partial attempt, multiple issues.</p> <p>Missing/incorrect.</p>	1.5