Hello

Your Name

2025-11-22

This template demonstrates a complete Quarto report with titles, sections, tables, references, formulas, cross-references, and executable code.

Table of contents

1 Intro

This document is a reusable template for analytical reports in Quarto. It supports citations like Roback and Legler Roback and Legler (2021) and Schober et al. Schober, Boer, and Schwarte (2018). You can also use custom macros from the header like **term** and Hello from a macro!.

We will reference Equation Equation 1, Figure Figure 1, and Table Table 2 as examples.

2 Methods

2.1 Model

We use logistic regression to model binary outcomes:

$$P(y = 1 \mid x) = \sigma(w^\top x + b) = \frac{1}{1 + e^{-(w^\top x + b)}} \tag{1}$$

For correlated features, interpret coefficients carefully; see Schober, Boer, and Schwarte (2018) for guidance on correlation.

2.2 Data

Example data dictionary:

Variable	Type	Description
age	numeric	Age in years
educational-num	numeric	Years of education
hours-per-week	numeric	Weekly work hours
workclass	category	Employment type
income_>50K	binary	1 if income > 50K, else 0

3 Results

3.1 Example Figure

```
import numpy as np
import matplotlib.pyplot as plt
x = np.linspace(0, 2*np.pi, 300)
plt.plot(x, np.sin(x), color="#2E86AB", lw=2)
plt.xlabel("x")
plt.ylabel("sin(x)")
plt.title("Sine Wave")
plt.grid(alpha=0.3)
```

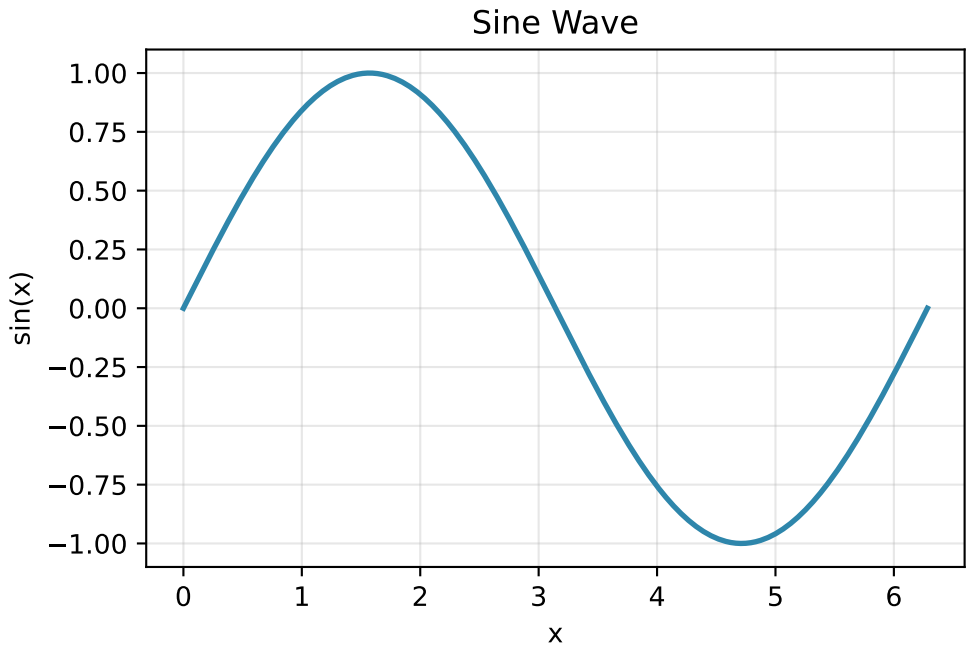

Figure 1: Sample figure demonstrating a simple sine wave.

3.2 Example Table

```
import pandas as pd
df = pd.DataFrame({
  "Metric": ["Accuracy", "Precision", "Recall", "F1"],
  "Score":  [0.85, 0.79, 0.72, 0.75]
})
df
```

Table 2: Sample data table created in Python.

	Metric	Score
0	Accuracy	0.85
1	Precision	0.79
2	Recall	0.72
3	F1	0.75

We refer to Figure Figure 1 and Table Table 2 for demonstration.

4 Discussion

- Quarto enables reproducible, documented analysis with code and narrative.

- Equations like Equation 1 are first-class citizens alongside figures and tables.
- Use citations such as Roback and Legler (2021) to anchor methods in literature.

5 Conclusion

This template can be cloned for new reports. Replace text, update references, and embed your analysis code.

6 Appendix

6.1 Additional Math

A simple linear model:

$$y = X\beta + \varepsilon \tag{2}$$

Refer to Equation Equation 2 in text.

6.2 Re-usable Blocks

- Use sections and sub-sections to structure content.
- Add callouts, code-folding, and filters as needed.
- Keep references in references.bib and cite with `@key`.

Roback, Paul, and Julie Legler. 2021. *Beyond Multiple Linear Regression: Applied Generalized Linear Models and Multilevel Models in r*. Chapman; Hall/CRC. https://bookdown.org/roback/bookdown-BeyondMLR/ch-MLRreview.html.

Schober, Patrick, Christa Boer, and Lothar A. Schwarte. 2018. "Correlation Coefficients: Appropriate Use and Interpretation." *Anesthesia & Analgesia* 126 (5): 1763–68. https://doi.org/10.1213/ANE.0000000000002864.