Verified classification figures

Figures are either real Iris model results, original conceptual diagrams, or explicitly labelled synthetic arithmetic.

Binary Vs Multiclass

Two distinct supervised classification tasks



Classification Vs Regression

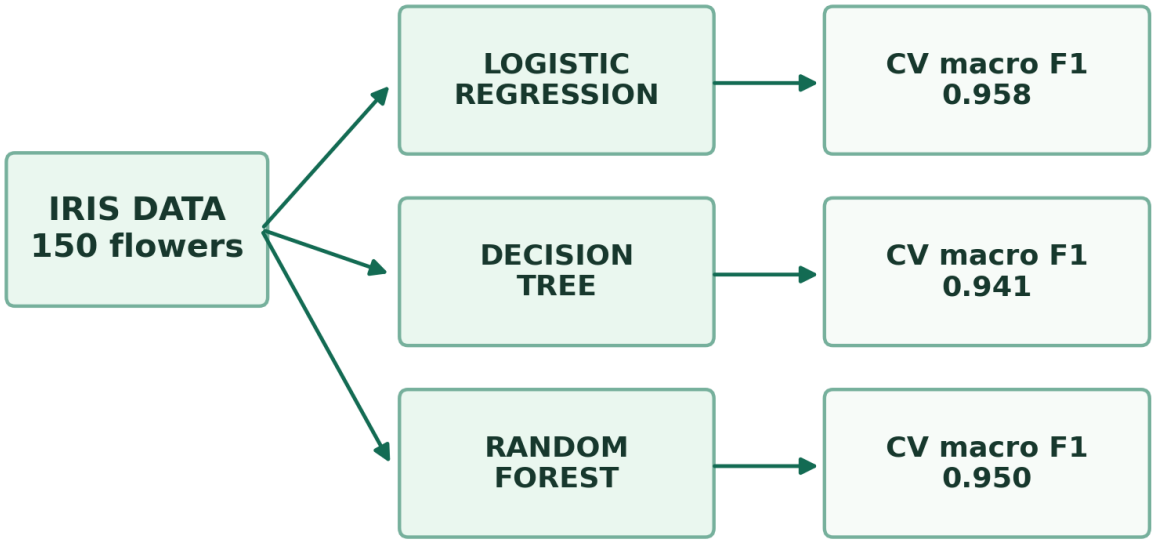
Classification predicts labels; regression predicts quantities



Featured Classification Illustration

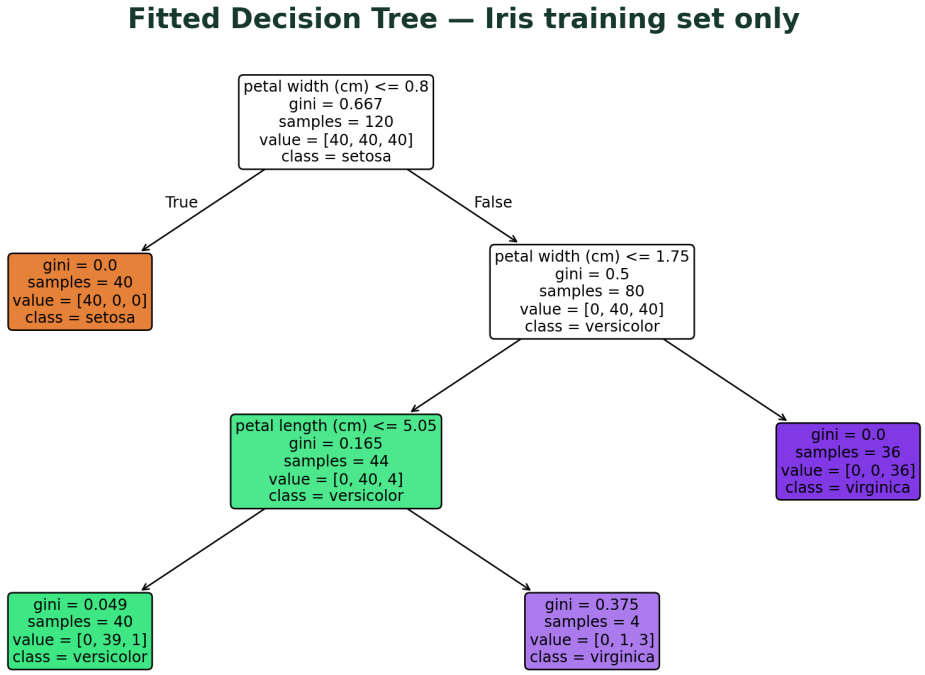
CLASSIFICATION / THE IRIS PROJECT

Three algorithms • four measurements • honest evaluation

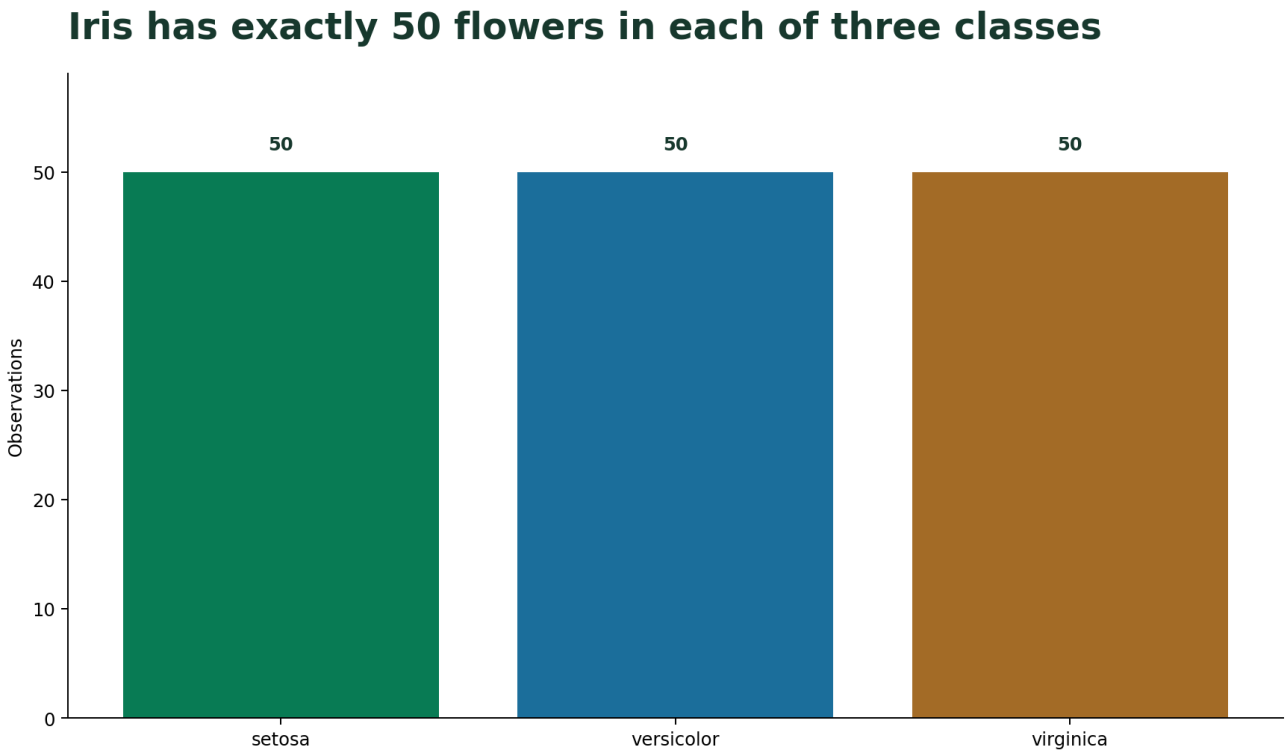


Real scikit-learn Iris data • Training-only cross-validation • Seed 87

Fitted Decision Tree

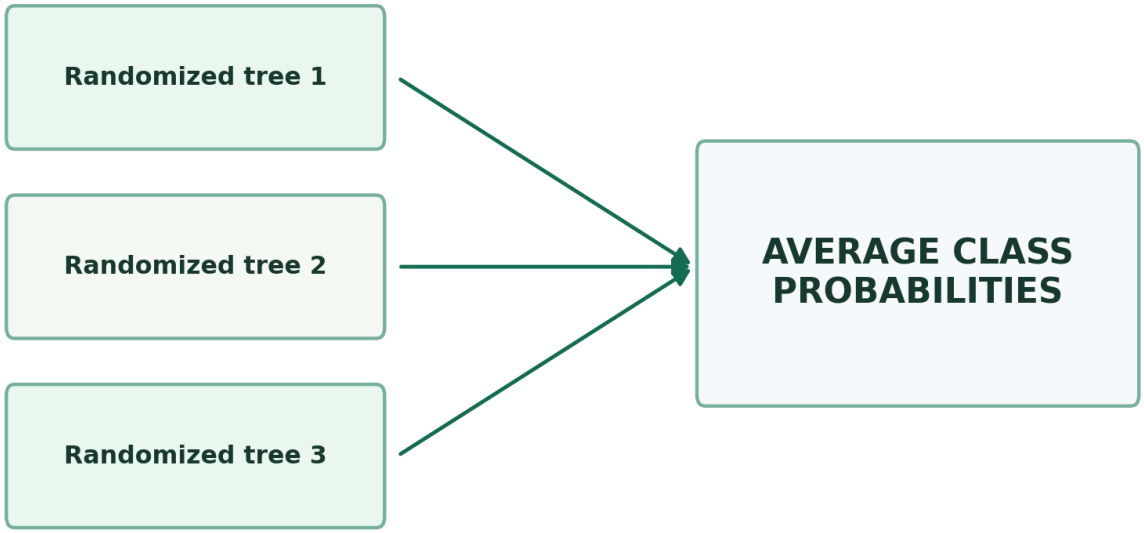


Iris Class Counts

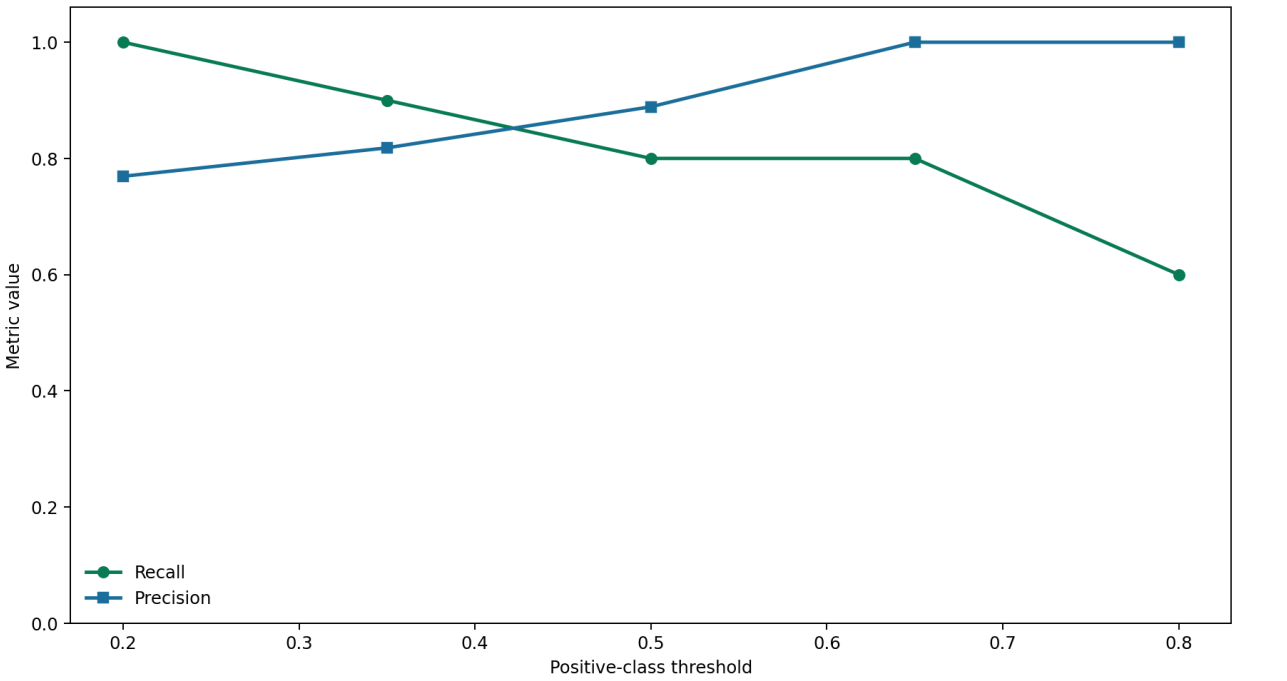


Random Forest Ensemble

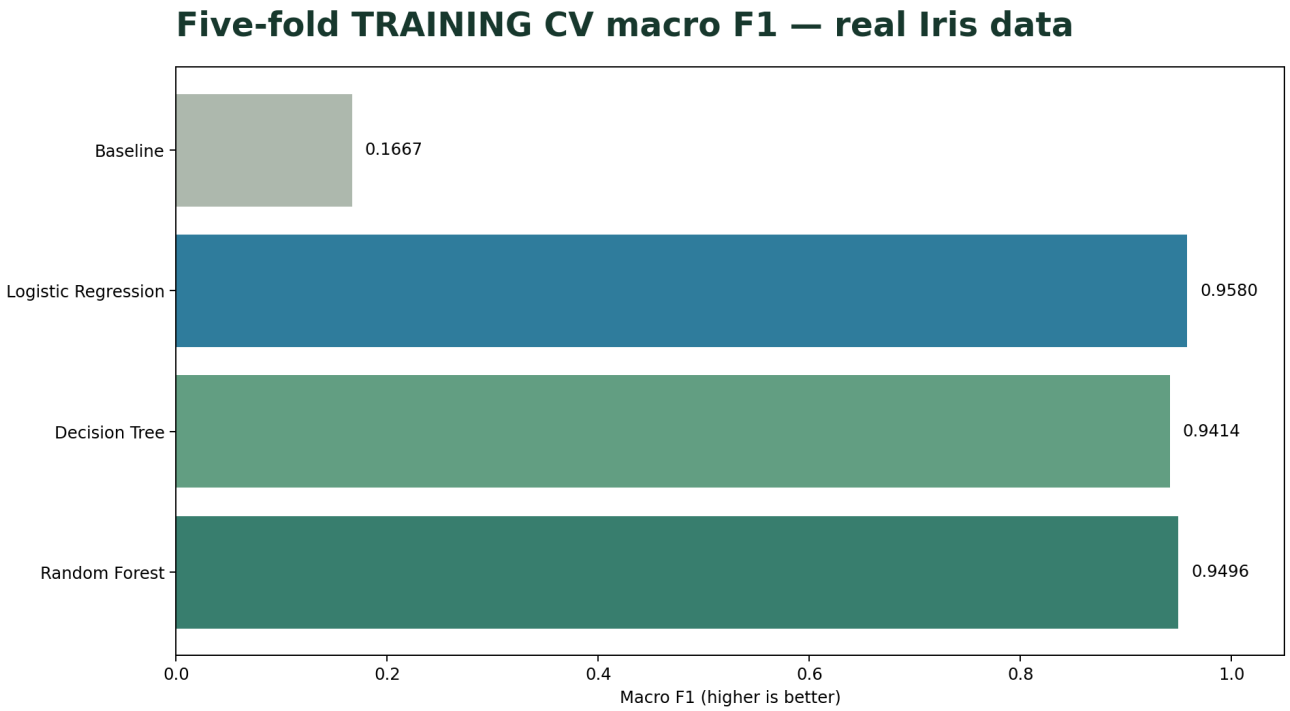
Random Forest: diverse trees, aggregated prediction



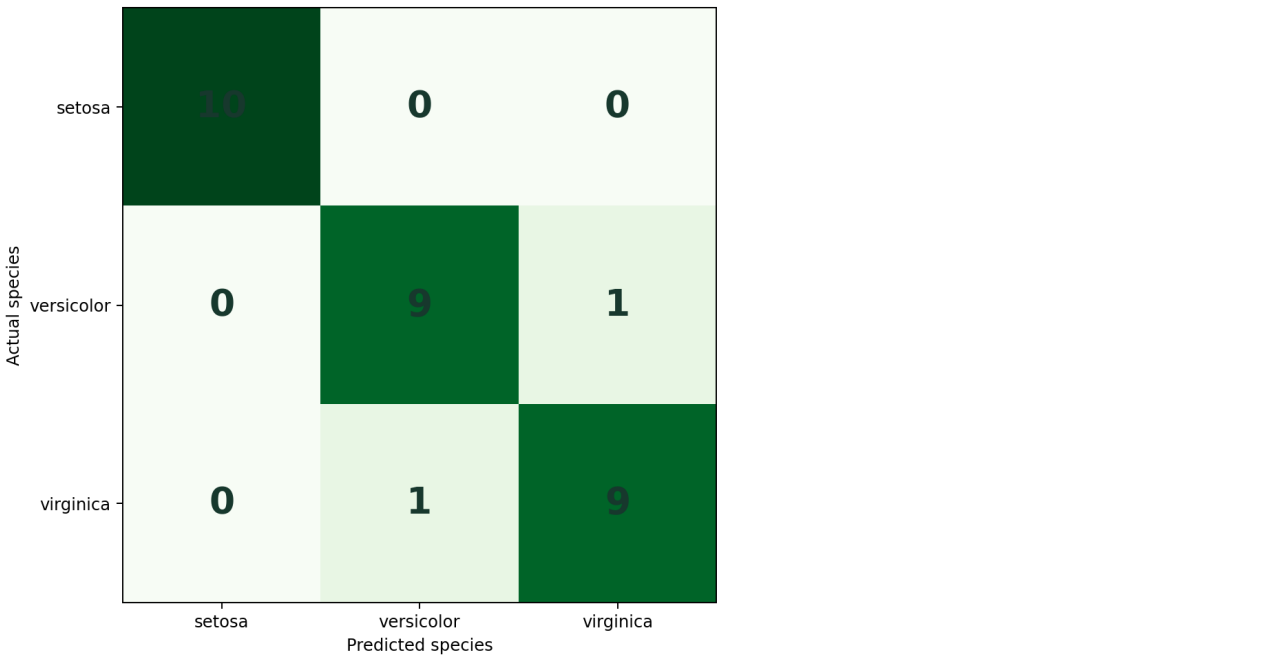
Real Binary Thresholds



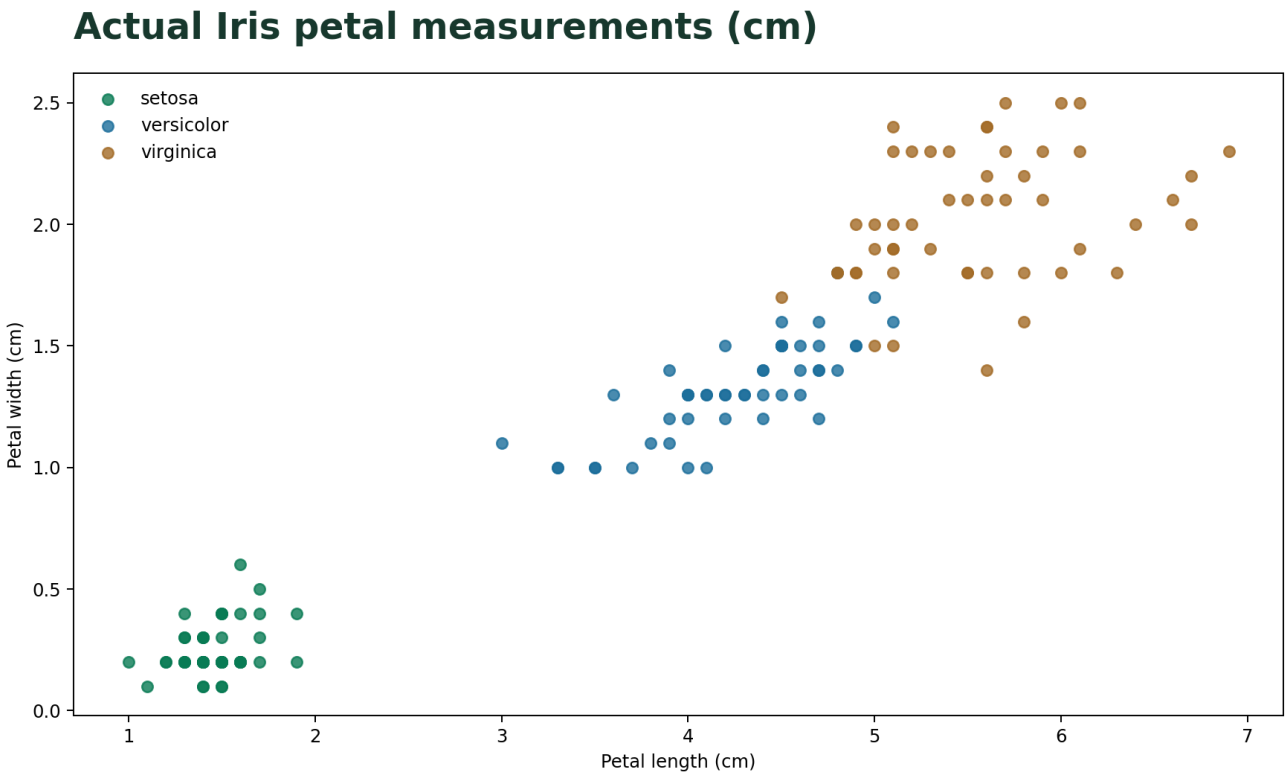
Real Cv Model Comparison



Real Heldout Confusion Matrix



Real Iris Petal Scatter



Responsible Classification

Before trusting a classifier, ask four questions

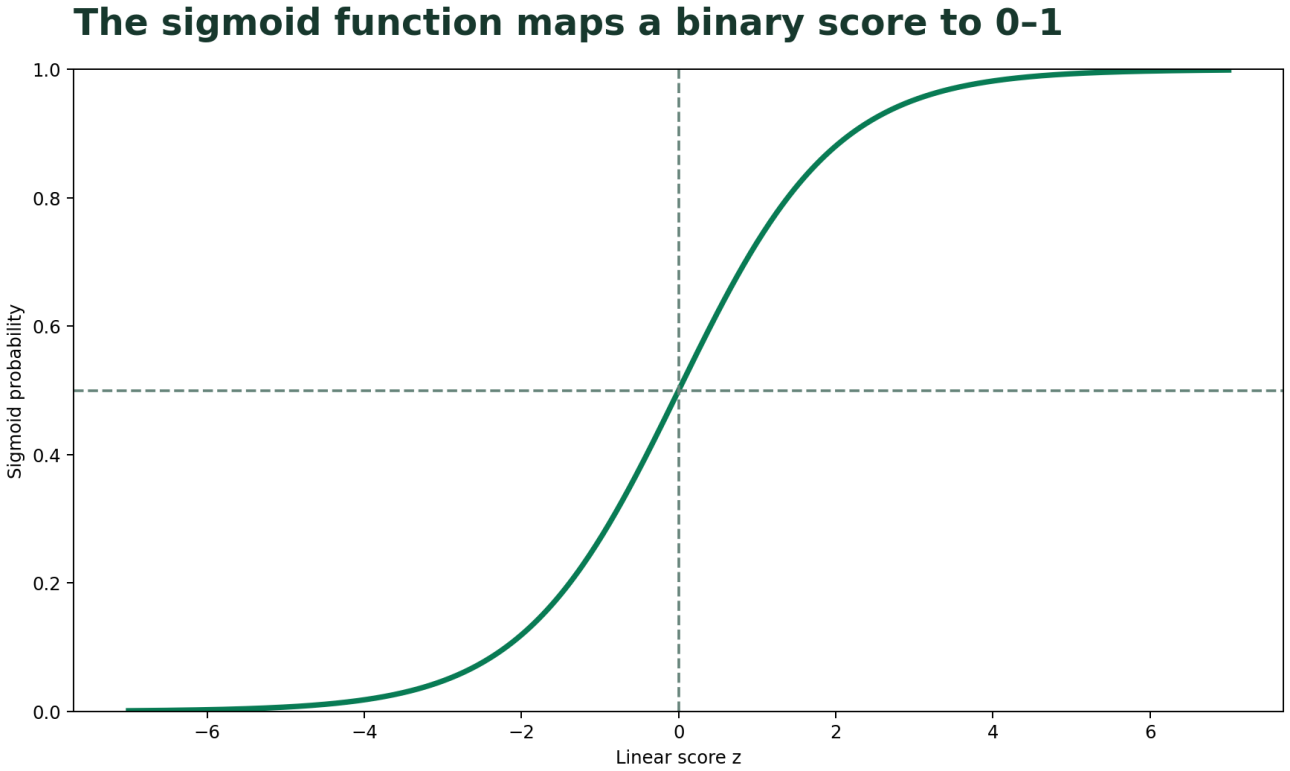
DATA
Are classes representative?

ERRORS
Who is harmed by mistakes?

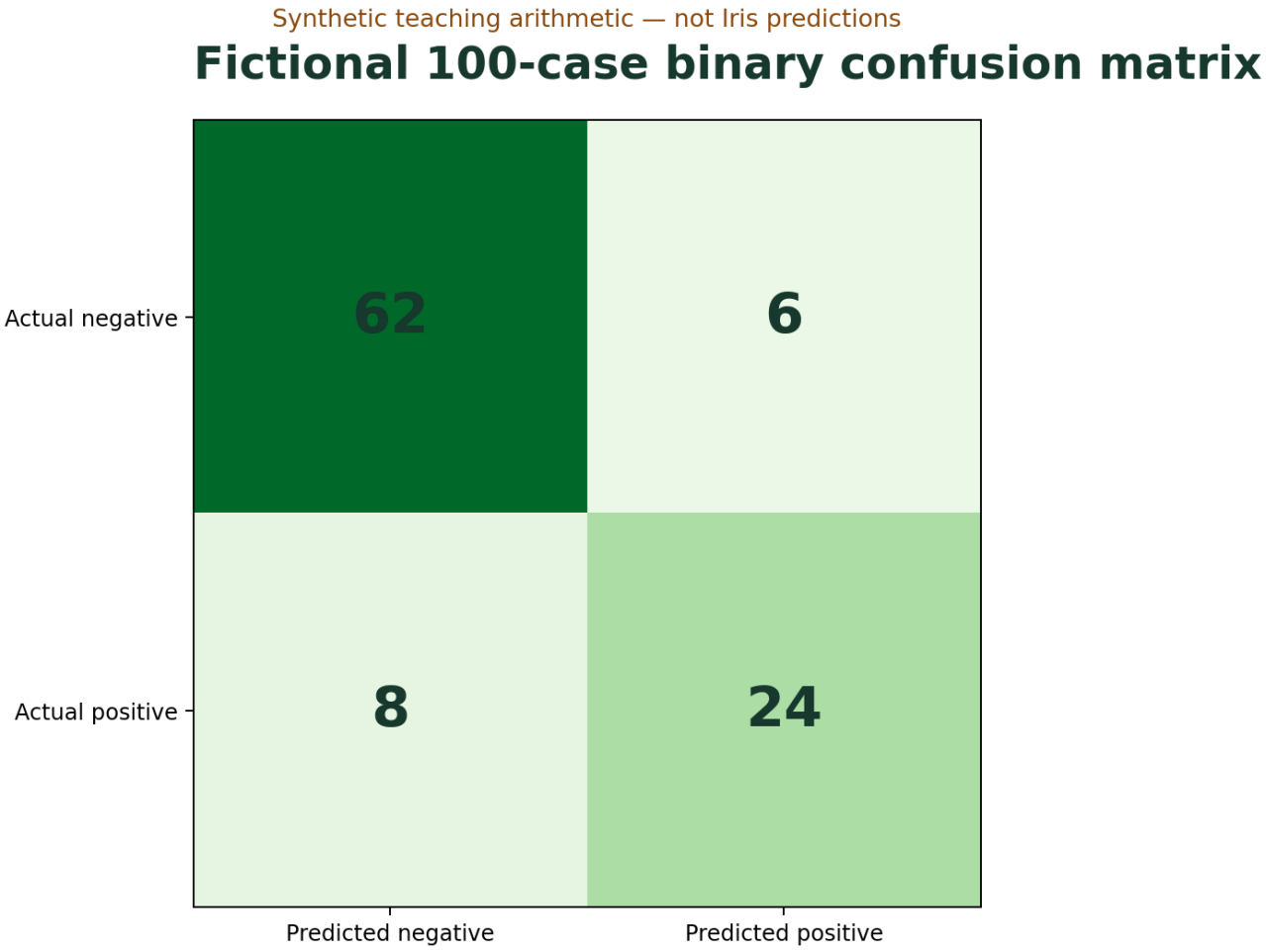
SCORES
Are probabilities calibrated?

OVERSIGHT
Is deployment appropriate?

Sigmoid Function



Synthetic Binary Confusion Matrix



Workflow

From a question to a defensible classification report

