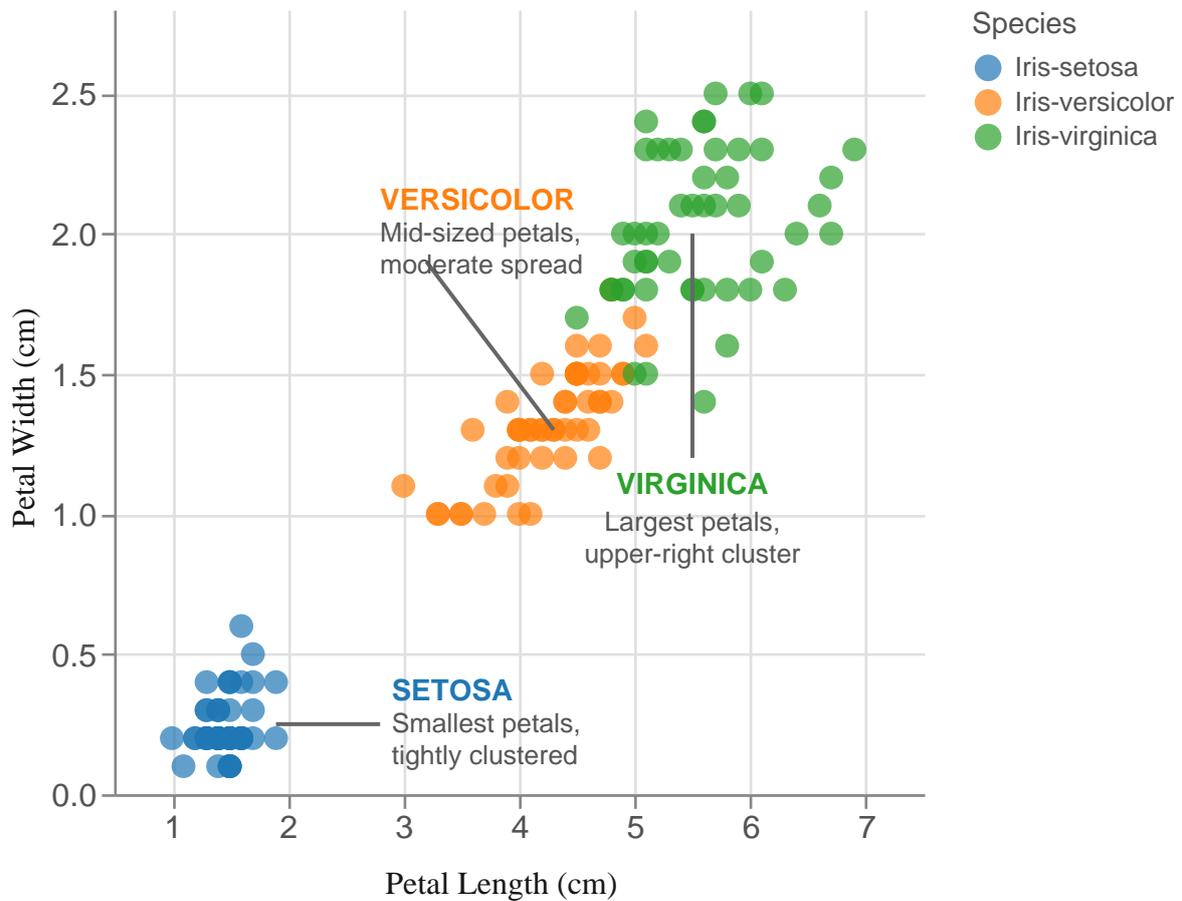# Iris Species Form Distinct Clusters by Petal Dimensions

Classic Iris dataset with 150 flower samples across 3 species, measuring sepal and petal dimensions.

Petal length vs width reveals clear species separation, making these measurements highly effective for classification

Dataset Snapshot

Classic Iris dataset with 150 flower samples across 3 species, measuring sepal and petal dimensions.

Key Insight

The three Iris species form remarkably distinct clusters when plotted by petal dimensions. Setosa flowers cluster tightly in the lower-left with the smallest petals (length ~1-2cm, width ~0.1-0.5cm), while Virginica occupies the upper-right with the largest petals. Versicolor sits in the middle ground, with slight overlap into Virginica territory. This natural separation makes petal measurements highly effective for species classification.

Supporting Chart

A scatter plot with color-coded species and annotations highlighting each cluster's position and characteristics.

Why This Matters

- Petal dimensions alone can classify most Iris samples with high accuracy

- Setosa is perfectly separable from the other two species

- The slight Versicolor-Virginica overlap suggests these species are more closely related

Confidence and Limits

High confidence in cluster patterns; dataset is balanced with 50 samples per species.