Two-feature classification

A two-feature classification for salmon and sea bass fish is given in the first chapter of Duda and Hart.

Here are five examples of two-feature classification; go to the website and **draw the corresponding graph**:

1. Iris Dataset:
   - Features: Sepal length and sepal width.
   - Classes: Setosa, Versicolor, and Virginica.
   - Graph: Scatter plot with sepal length on the x-axis and sepal width on the y-axis. Different classes are represented by different colours or markers. Each species (Setosa, Versicolor, Virginica) is represented by a different colour or marker.

2. Breast Cancer Dataset:
   - Features: Mean radius and mean texture.
   - Classes: Malignant and benign.
   - Graph: Scatter plot with mean radius on the x-axis and mean texture on the y-axis. Malignant and benign tumours are distinguished by different colours or markers.

3. Wine Dataset:
   - Features: Alcohol content and colour intensity.
   - Classes: Three different cultivars of wine.
   - Graph: Scatter plot with alcohol content on the x-axis and colour intensity on the y-axis. Each type of wine cultivar is represented by a different colour or marker.

4. Titanic Dataset:
   - Features: Age and fare.
   - Classes: Survived or not survived.
   - Graph: Scatter plot with age on the x-axis and fare on the y-axis. Survived passengers and non-survived passengers are indicated by different colours or markers.

5. Diabetes Dataset:
   - Features: Glucose level and body mass index (BMI).
   - Classes: Diabetic or non-diabetic.
   - Graph: Scatter plot with glucose level on the x-axis and BMI on the y-axis. Diabetic and non-diabetic individuals are distinguished by different colours or markers.

Each graph visually represents the distribution of data points based on the two selected features, with different classes distinguished by colours or markers, demonstrating how classification boundaries can be drawn in two-dimensional space.

Each graph would illustrate the distribution of data points in two-dimensional space based on the selected features, providing insights into how the data is separated or clustered, and where potential classification boundaries might be drawn.