Machine Learning: Introduction

by Elena Battini Sönmez İstanbul Bilgi University

based on 'Pattern Classification' by Duda, Hart, Stork

Examples of Patterns:

- o Hand written character:
- UPC bar code
- Fingerprint
- Animal footprint
- **O** ...







aA-gXA

The fish-packing firm (1/2):

- Conveyor belt
- Salmon

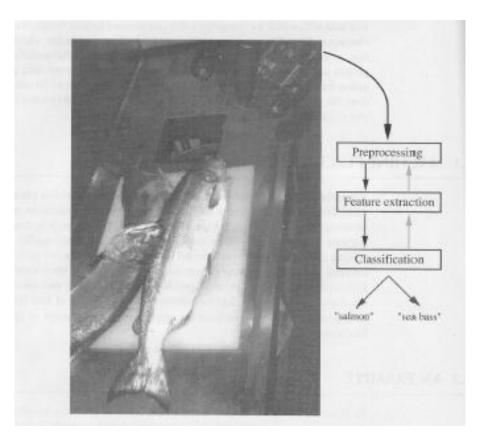


Sea bass

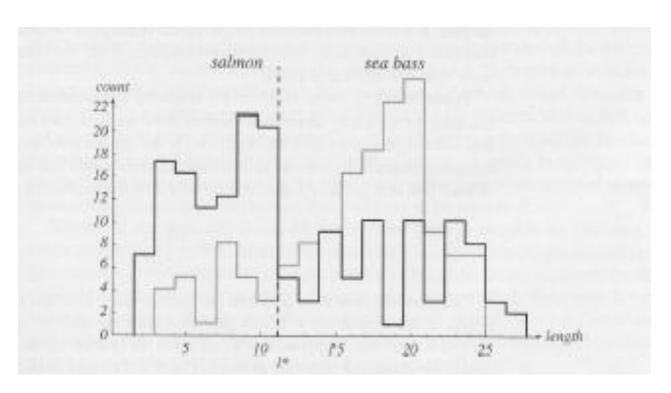




The fish packing firm (2/2):

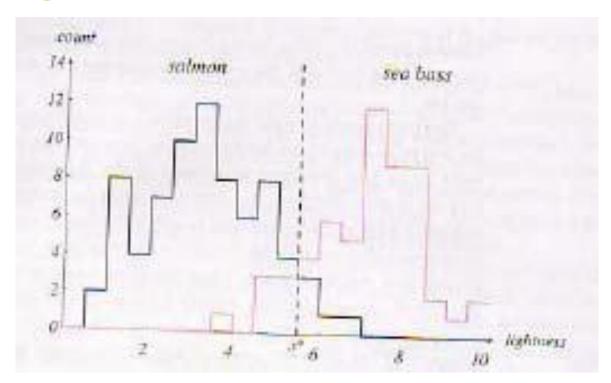


Histogram of the feature 'length':

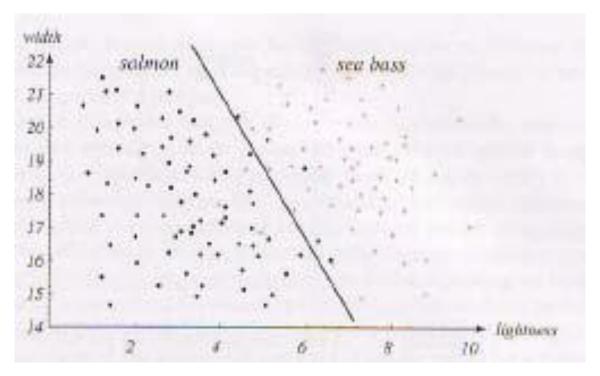


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Histogram of the feature 'lightness':

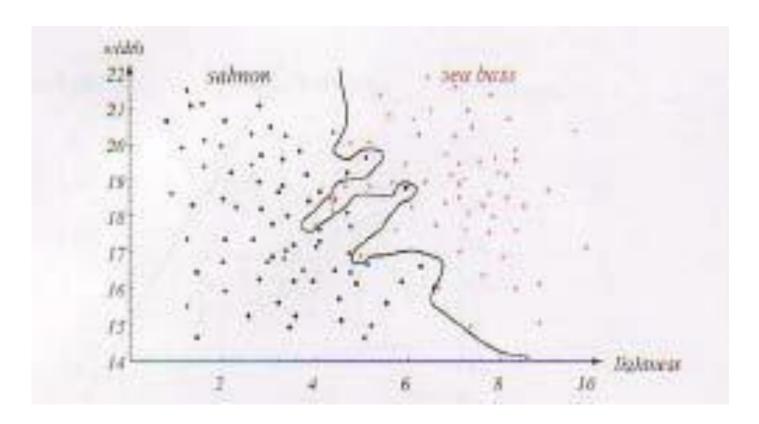


Two dimensional features:

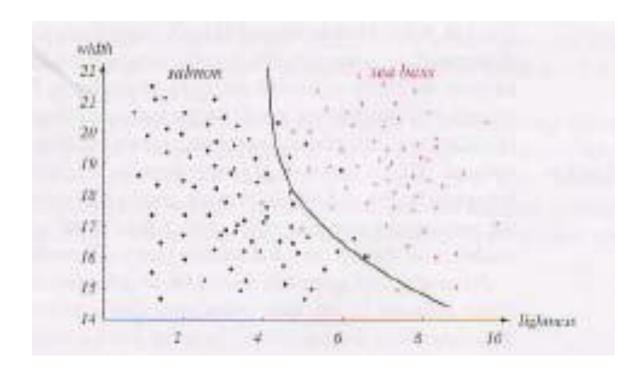


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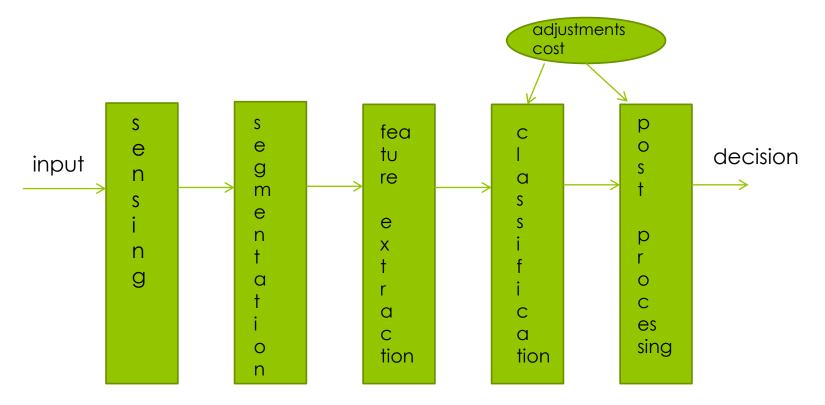
Generalization:



Optional trade-off:



Pattern Recognition Systems:



The design cycle:

