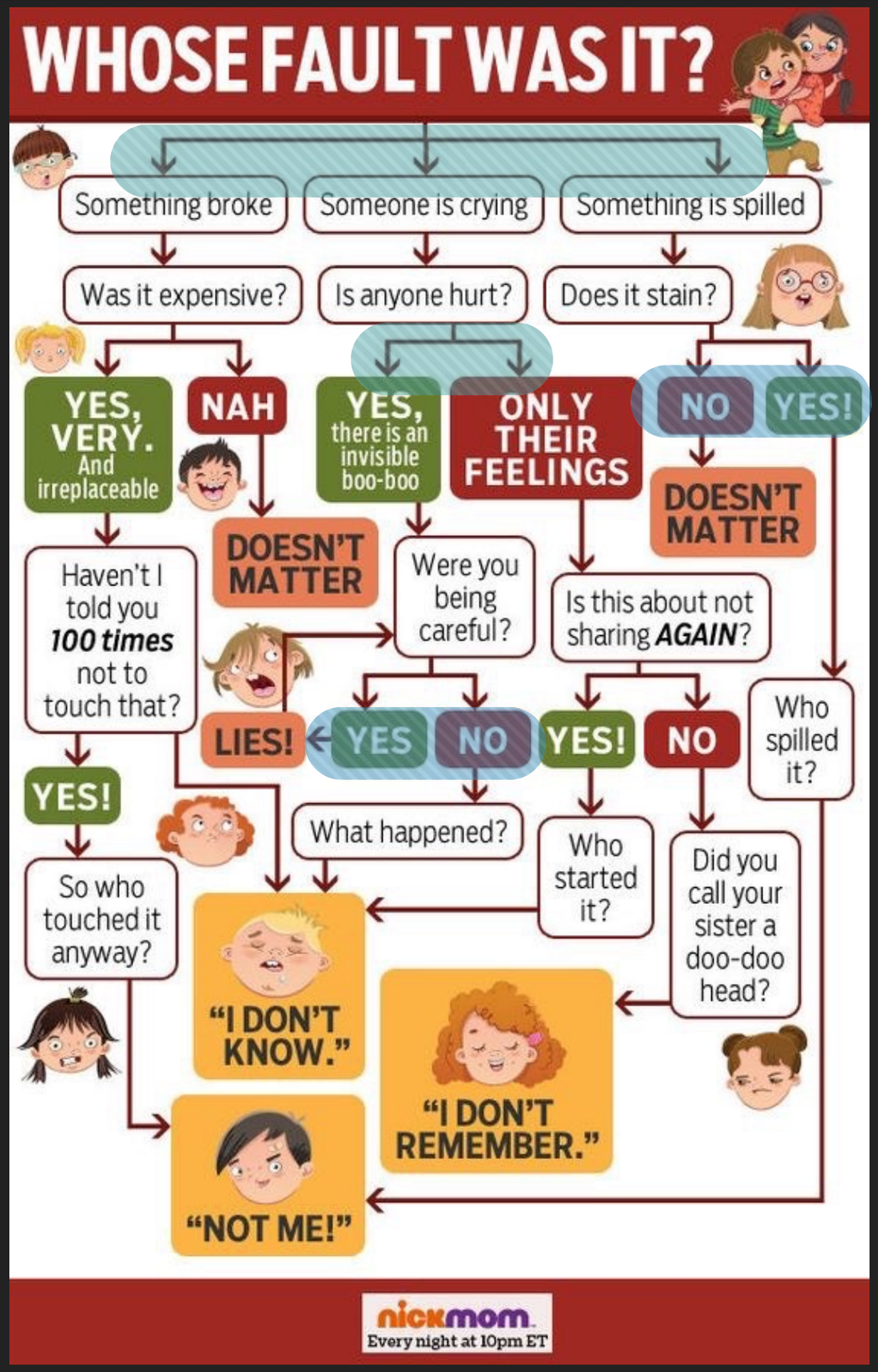
DECISION TREES EXAMPLES

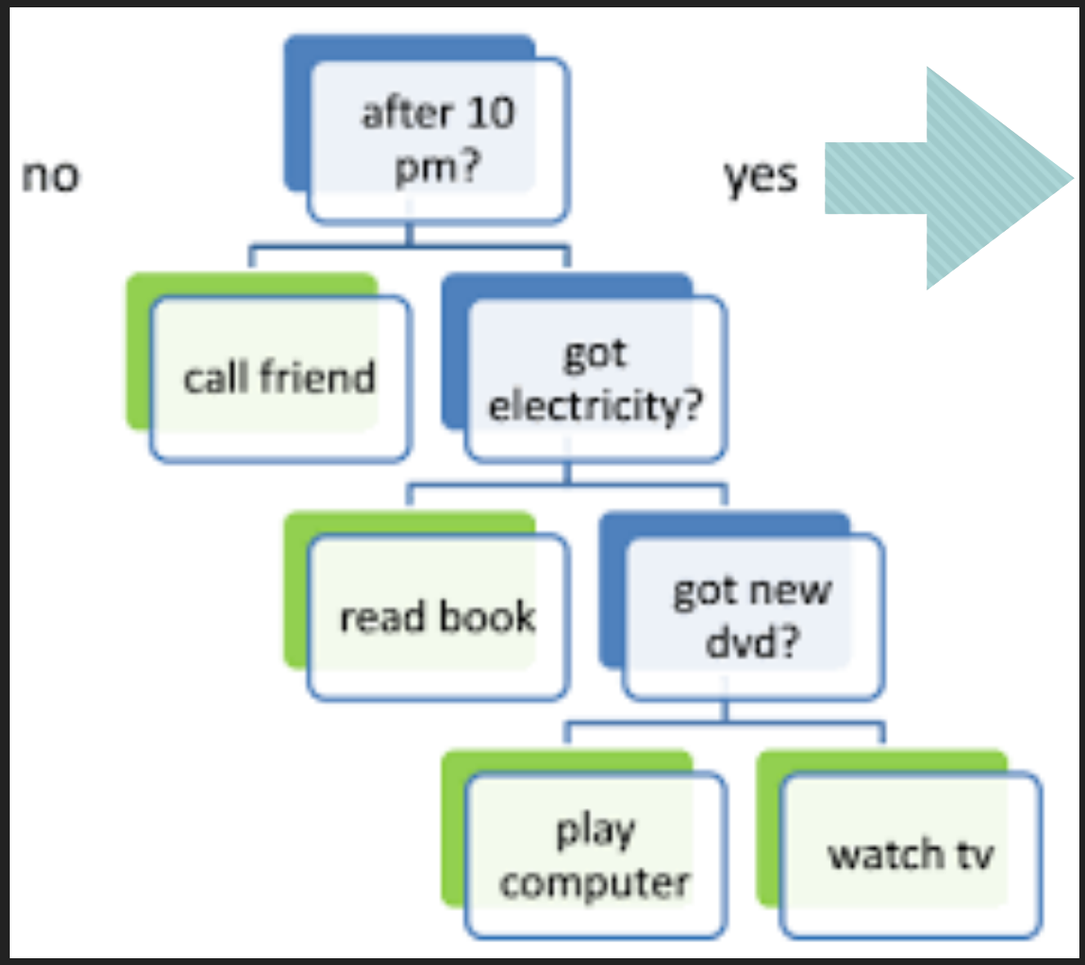
- Pre-defined paths



https://au.pinterest.com/pin/407294360023814591/

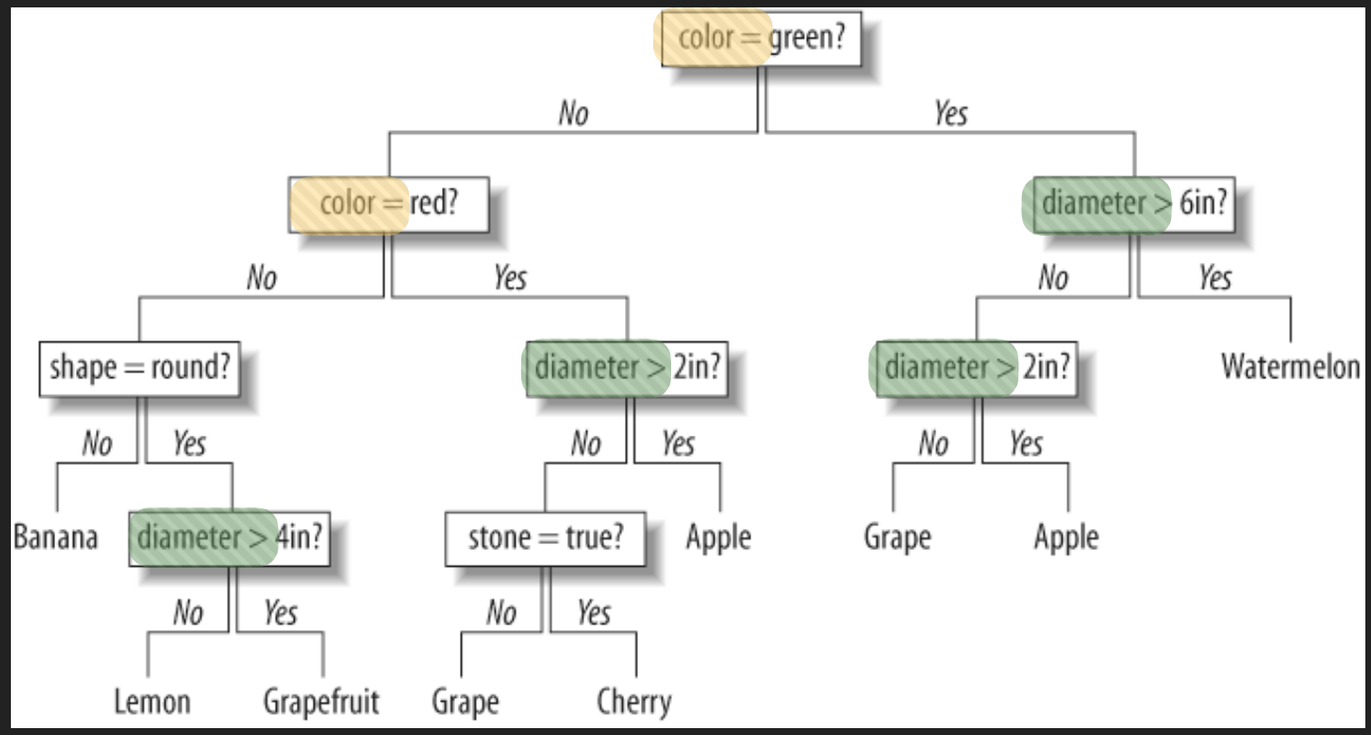
DECISION TREES EXAMPLES

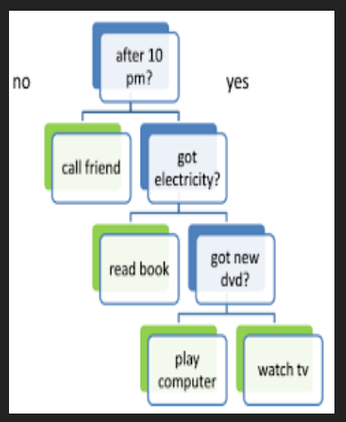
- Pre-defined paths
- Algorithms



DECISION TREES EXAMPLES

- Pre-defined paths
- Algorithms
- Identification

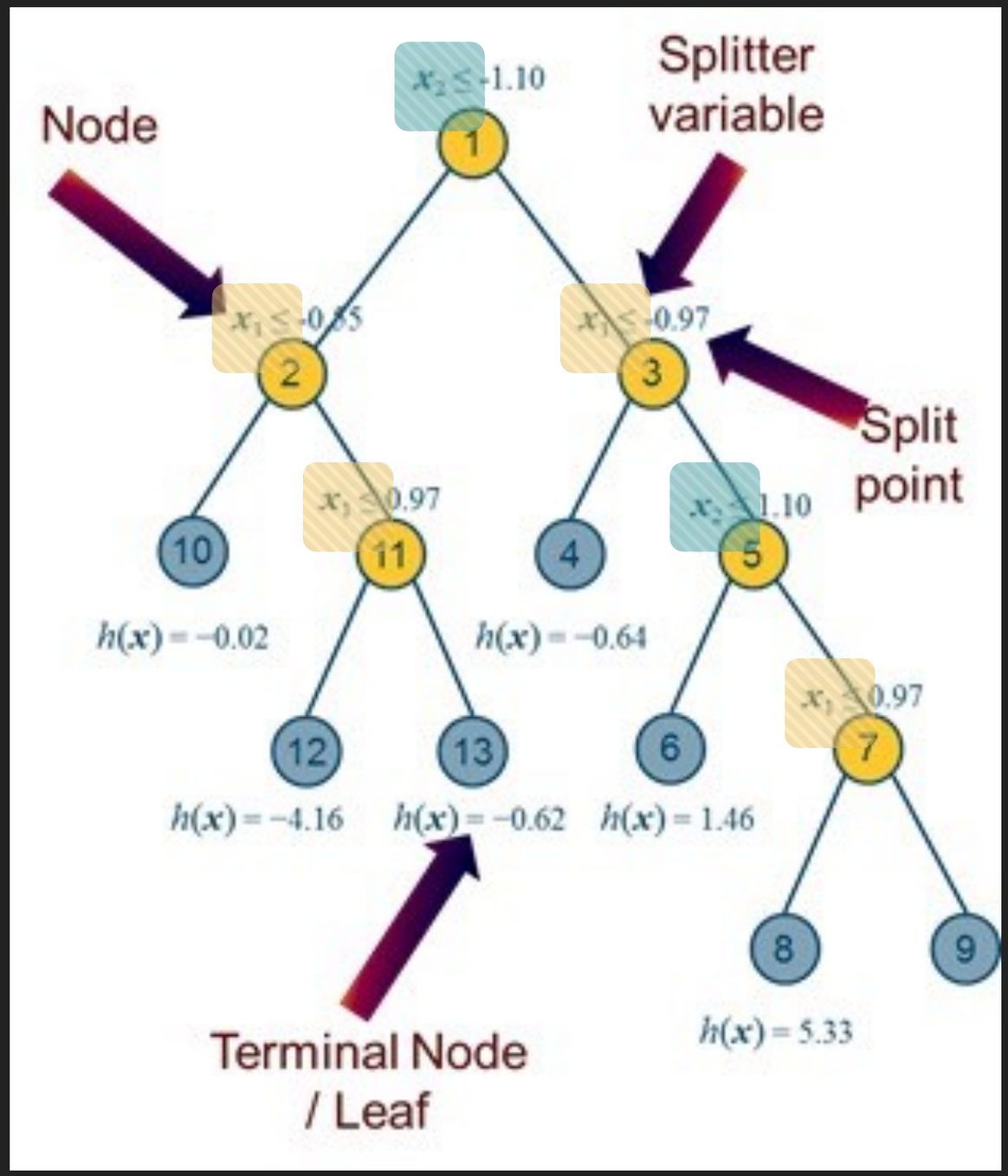


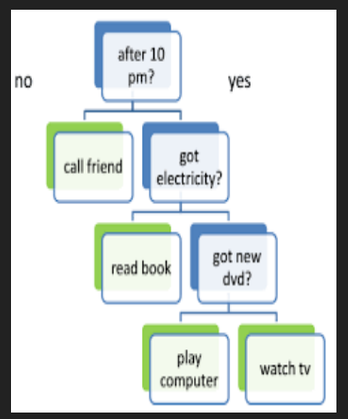


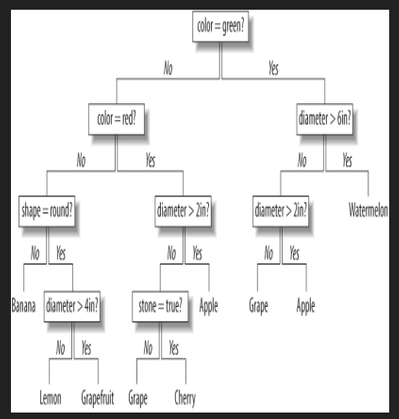
https://www.safaribooksonline.com/library/view/programming-collective-intelligence/9780596529321/

DECISION TREES EXAMPLES

- Pre-defined paths
- Algorithms
- Identification
- Modelling







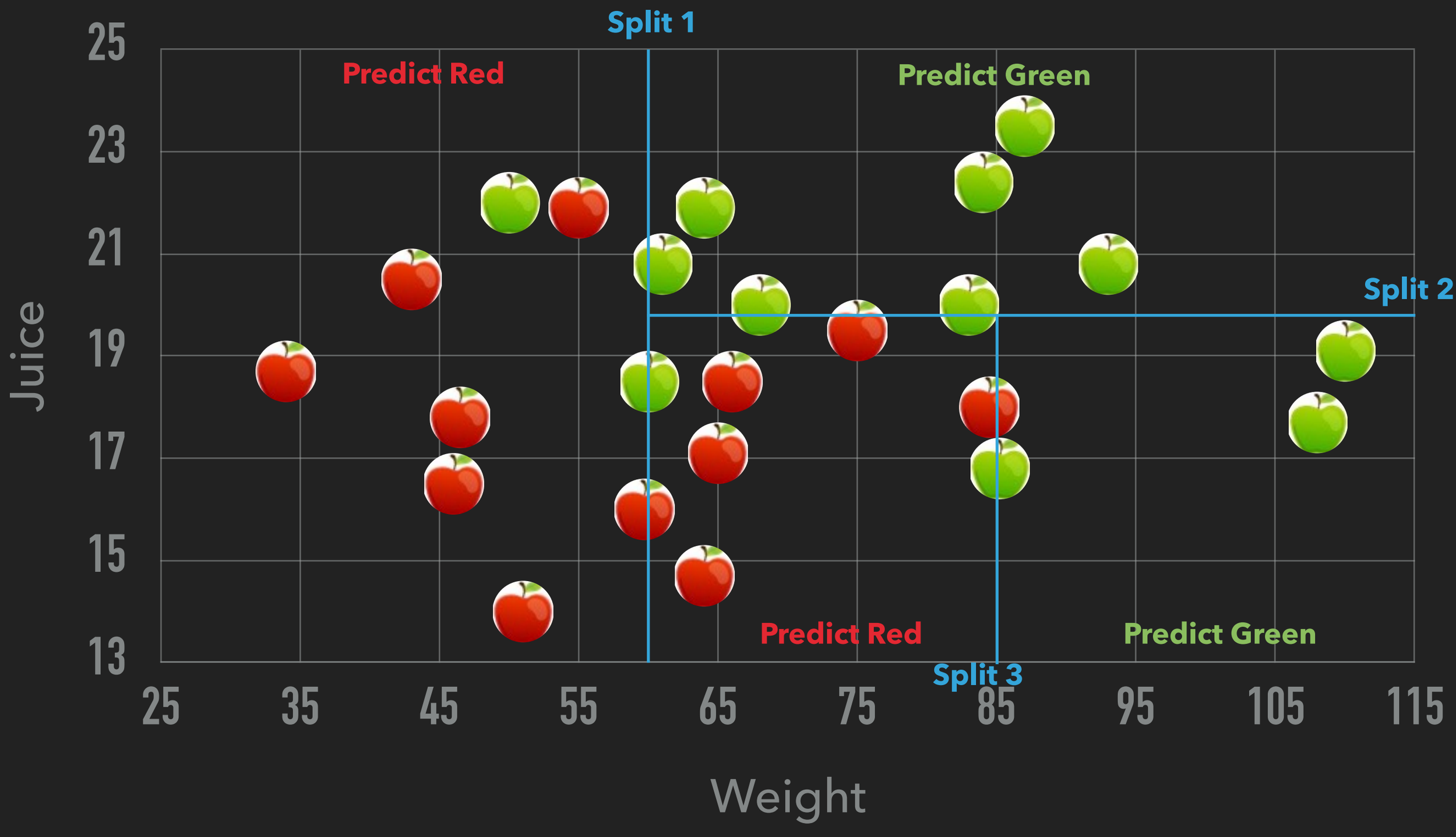
http://www.edupristine.com/blog/understanding-and-creating-decision-tree

BUILDING DECISION TREES

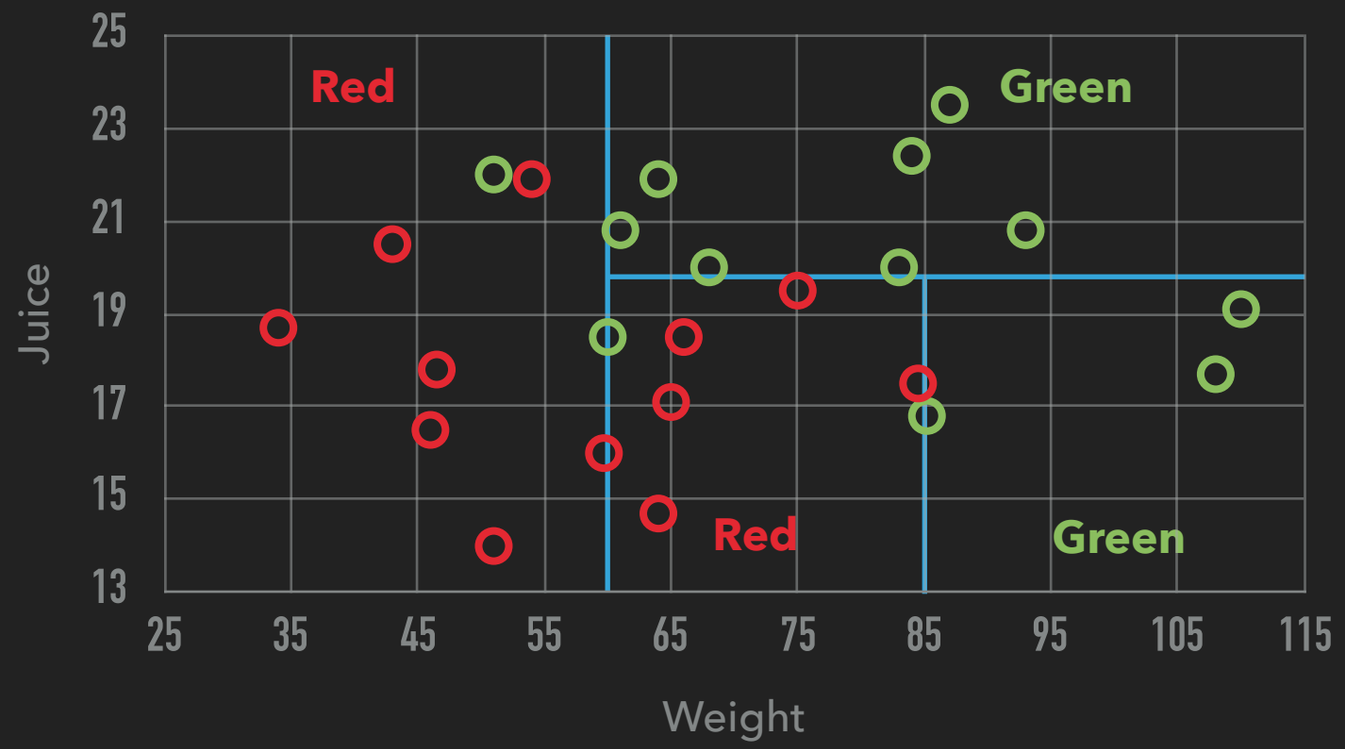
- The idea is to: Iteratively separate data into homogeneous groups
  - Split data by category or range, one feature at a time
  - Into groups as pure as possible
- repeating the process until a certain stop condition is reached

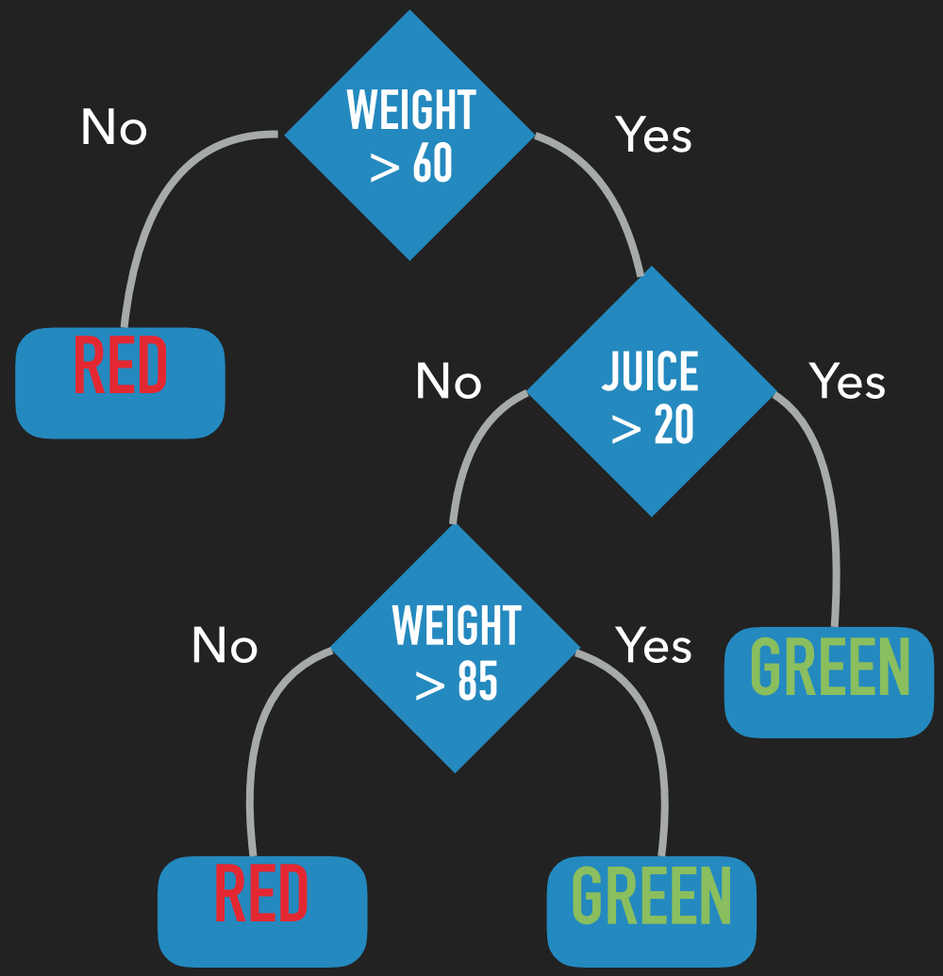
http://www.clipartpanda.com/clipart_images/family-tree-background-viewing-29581122

ITERATIVELY SEPARATE DATA INTO HOMOGENEOUS GROUPS



MAPPING THE DECISION TREE





GREEDY DECISION TREE LEARNING

1. Start with an **empty** tree

2. Select a **feature** to split the data
   (Look for the feature that gives the **smallest** **classification error**)

3. For **each** **split** of the tree

    1. If reached **stop condition** (purity, # elements, depth)
       then make predictions

    2. Otherwise
       go to 2. and continue recursively on this **split**