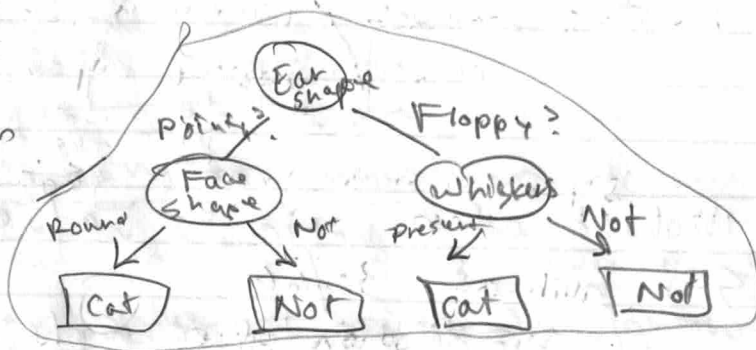


DECISION TREES

Super practical, great results, but not much academic interest!

Example:

- Build from data set
- Can build various trees from the data!



Learning a decision tree

1. Pick root node split feature
2. For each node in layer $N+1$, choose split feature
3. Recur until reaching "pure" nodes → fully segmented classes

Key decisions:

- Choosing split features → want to ^(min)max purity
- When to stop splitting?

- node is 100% one class
- reached max depth
- Purity score improvements don't meet threshold
- # of examples in node is below threshold

★ Still need to avoid overfitting!

