

Probability & Entropy

Semester 1, 2022 Kris Ehinger

Outline

- Variable types
- Probability basics
- Probability distributions
- Entropy
- Bayes' rule

Variable types

Attribute types

- Each instance can have many attributes
- Attributes can be various types
 - Nominal (or categorical)
 - Ordinal
 - Continuous (or numerical)

Nominal/categorical variable

- Variable can take multiple values which are discrete types or categories
 - outlook: sunny, overcast, rainy
 - object: car, bike, pedestrian, street sign, ...
- There is no natural ordering of the values; they are all equally dissimilar from each other
- boolean is a special type of nominal variable with only two possible values
 - isMonday: true, false