



## Why

We have a dataset in some infinite set and want to summarize it by a probability density.

## Overview

We have an uncountable set of outcomes  $A$ . We have a dataset  $(a^1, \dots, a^n)$ . We want to define a correspondence between the dataset and probability densities over the set of outcomes  $A$ .

A *density selector* for a dataset of size  $n$  is a function which maps datasets of size  $n$  in  $A$  to densities on  $A$ . We do not want a density on the record sequences  $A^n$ , but rather a density on  $A$ .

