



## Data Matrix

### 1 Why

### 2 Definition

The *data matrix* corresponding to a data set of  $n$  records which are length  $d$  tuples of real numbers is the  $n$  by  $d$  matrix whose  $i$ th row is the  $i$  element of the data set.

#### 2.1 Notation

Let  $R$  denote the set of real numbers. Let  $(a^1, \dots, a^n)$  where  $a^i \in R^n$  for  $i = 1, \dots, n$ . Let  $A$  be the  $n \times d$  matrix whose rows are the  $a^i$ . Then  $A$  is the data matrix of  $(a^1, \dots, a^n)$ .