

## DATA MATRIX

## **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 ith row is the i element of the data set. Some authors refer to the data matrix as the  $design\ matrix$ .

## Notation

Let  $(a^1, \ldots, a^n)$  where  $a^i \in \mathbf{R}^n$  for  $i = 1, \ldots, n$ . Let A be the  $n \times d$  matrix whose rows are the  $a^i$ . Then A is the data matrix of  $(a^1, \ldots, a^n)$ . In other words,

$$A = \begin{bmatrix} (a^1)^\top \\ \cdots \\ (a^n)^\top \end{bmatrix}.$$

