# 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 $(a^1, \ldots, a^n)$ where $a^i \in R^n$ 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 $(a^1, \ldots, a^n)$.