



# Data Fitting

## 1 Why

Often the precepts and postcepts are elements of  $d$ -dimensional and  $m$ -dimensional space, respectively. Moreover, we often believe in the existence of a functional prelation between these two spaces.

## 2 Definition

We think a vector in  $d$ -dimensional space and a vector in  $m$ -dimensional space are approximately related by a function. We call the argument to the function the **independent variable** and we call the result of the function the **dependent variable**. If  $m = 1$ , the dependent variable is a single real number.

A **predictor** is a function from the  $d$  dimensional space to the  $m$  dimensional space.