# Multiple Linear Regression. In-class Exercise 2

EL-GY 6143 Intro Machine Learning. Prof. Sundeep Rangan

## Question

Consider a linear model:

We are given the following data: Only the first three rows and the final entry are shown.

100 subjects

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Subject number | HR before | HR after | Mins on treadmill | Speed (min/km) | Days exercise / week |
| 123 | 60 | 90 | 1 | 5.2 | 3 |
| 456 | 80 | 110 | 2 | 4.1 | 1 |
| 789 | 70 | 130 | 5 | 3.5 | 2 |
|  |  |  |  |  |  |
| 283 | 75 | 100 | 1 | 4.8 | 0 |

* Q1: What is the feature matrix and target vector . What are their dimensions?
  + Fill in only the values from the first three rows and the last row
* Q2. Suppose that after training, we find parameters . If the initial HR is 70 bpm, what is the predicted HR after 2 minutes of exercise at 5 km/hr.

## Solution

