**Project Proposal**

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**Dataset:** https://archive.ics.uci.edu/ml/datasets/Fertility

**Data Snapshot:**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Season** | **Age** | **Childish disease** | **Trauma** | **Surgical Intervention** | **High Fevers in Last year** | **Alcohol Consumption** | **Smoking Habit** | **Number of hours spent sitting** | **Output** |
| -0.33 | 0.69 | 0 | 1 | 1 | 0 | 0.8 | 0 | 0.88 | N |
| -0.33 | 0.94 | 1 | 0 | 1 | 0 | 0.8 | 1 | 0.31 | O |
| -0.33 | 0.5 | 1 | 0 | 0 | 0 | 1 | -1 | 0.5 | N |
| -0.33 | 0.75 | 0 | 1 | 1 | 0 | 1 | -1 | 0.38 | N |

**Objective:**

To use the data to predict seminal quality in males.

**Explanatory variables:**

1. Season in which the analysis was performed. 1) winter, 2) spring, 3) Summer, 4) fall. (-1, -0.33, 0.33, 1)
2. Age at the time of analysis. 18-36 (0, 1)
3. Childish diseases (ie , chicken pox, measles, mumps, polio) 1) yes, 2) no. (0, 1)
4. Accident or serious trauma 1) yes, 2) no. (0, 1)
5. Surgical intervention 1) yes, 2) no. (0, 1)
6. High fevers in the last year 1) less than three months ago, 2) more than three months ago, 3) no. (-1, 0, 1)
7. Frequency of alcohol consumption 1) several times a day, 2) every day, 3) several times a week, 4) once a week, 5) hardly ever or never (0, 1)
8. Smoking habit 1) never, 2) occasional 3) daily. (-1, 0, 1)
9. Number of hours spent sitting per day ene-16 (0, 1)

**Dependent Variable:**

1. Output: Diagnosis normal (N), altered (O)