

# Mini Statistical Analysis Report

1

**Dataset** : “Happiness Factors Dataset”

## **Dataset Overview :**

The dataset contains **158 observations** and **5 numerical features**:

- Economy
- Family (Fam)
- Health
- Freedom
- Happiness Score (H\_Score)

| Description : |            |            |            |            |            |
|---------------|------------|------------|------------|------------|------------|
|               | Economy    | Fam        | Health     | Freedom    | H_Score    |
| count         | 158.000000 | 158.000000 | 158.000000 | 158.000000 | 158.000000 |
| mean          | 0.846137   | 0.991046   | 0.630259   | 0.428615   | 5.375734   |
| std           | 0.403121   | 0.272369   | 0.247078   | 0.150693   | 1.145010   |
| min           | 0.000000   | 0.000000   | 0.000000   | 0.000000   | 2.839000   |
| 25%           | 0.545808   | 0.856823   | 0.439185   | 0.328330   | 4.526000   |
| 50%           | 0.910245   | 1.029510   | 0.696705   | 0.435515   | 5.232500   |
| 75%           | 1.158448   | 1.214405   | 0.811013   | 0.549092   | 6.243750   |
| max           | 1.690420   | 1.402230   | 1.025250   | 0.669730   | 7.587000   |

All columns are numerical and there are **no missing values**, making the dataset clean and suitable for statistical analysis and machine learning preprocessing.

## Correlation Analysis of a data

Correlation :

|         | Economy  | Fam      | Health   | Freedom  | H_Score  |
|---------|----------|----------|----------|----------|----------|
| Economy | 1.000000 | 0.645299 | 0.816478 | 0.370300 | 0.780966 |
| Fam     | 0.645299 | 1.000000 | 0.531104 | 0.441518 | 0.740605 |
| Health  | 0.816478 | 0.531104 | 1.000000 | 0.360477 | 0.724200 |
| Freedom | 0.370300 | 0.441518 | 0.360477 | 1.000000 | 0.568211 |
| H_Score | 0.780966 | 0.740605 | 0.724200 | 0.568211 | 1.000000 |

| Strength Meaning  |          |
|-------------------|----------|
| Correlation Value | Strength |
| 0.7 to 1          | Strong   |
| 0.3 to 0.7        | Moderate |
| 0 to 0.3          | Weak     |

High correlation observed between:

**Economy ↔ Health ≈ 0.81**

This suggests:

- Economically strong regions often have better healthcare systems
- Possible multicollinearity risk in ML models
- May require feature selection or dimensionality reduction later

