Assignment

Introduction to Data Science

Marks 5

Due date: 26-10-2023 at 01:30 PM

Question: Consider the following data about population

|  |  |  |
| --- | --- | --- |
| **Age** | **Income** | **Savings** |
| 20 | 100,000 | 50,000 |
| 22 | 120,000 | 40,000 |
| 32 | 80,000 | 5,000 |
| 40 | 350,000 | 10,000 |
| 50 | 50,000 | 0 |
| 36 | 150,000 | 30,000 |
| 47 | 250,000 | 8,000 |

1. You are required to generate the R and R2 factors of the Linear and Polynomial regressions respectively and fill in the following data:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Age | Predicted Income | | Predicted Savings | |
|  | Linear Regression | Polynomial Regression | Linear Regression | Polynomial Regression |
| 15 |  |  |  |  |
| 55 |  |  |  |  |
| 65 |  |  |  |  |

1. By using the percentile calculation please find out the income and saving of the following percentage of the population:

|  |  |  |
| --- | --- | --- |
| Percentile | Income | Savings |
| 25 |  |  |
| 50 |  |  |
| 75 |  |  |