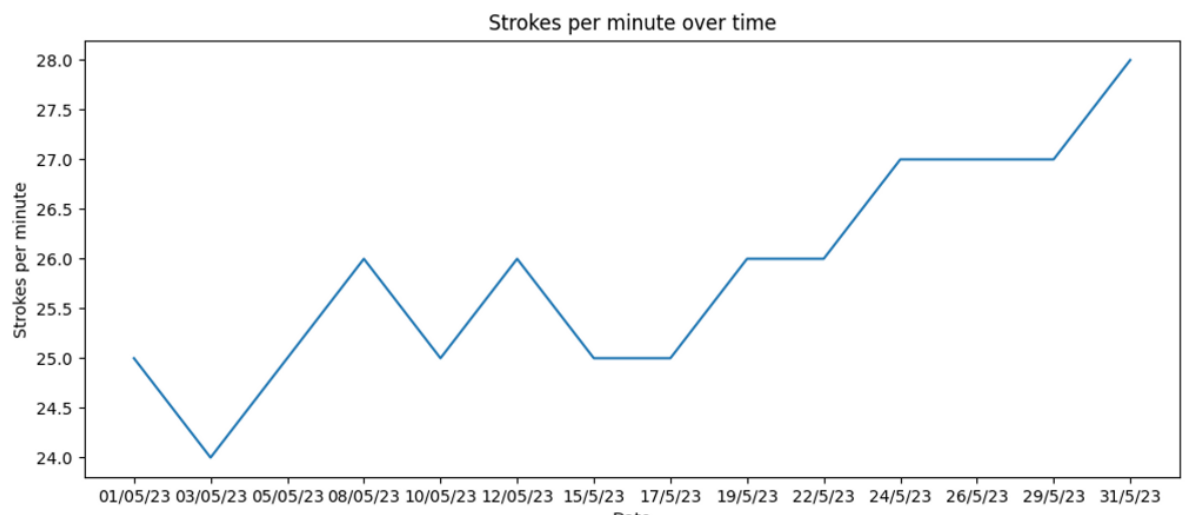


Report:  
Project 1: Python: Analysis of my real fitness data with iFIT  
application

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## [Strokes per minute]

- What is the average number of strokes per minute during the 5 weeks? 25.85
- Create a graph: Strokes per minute



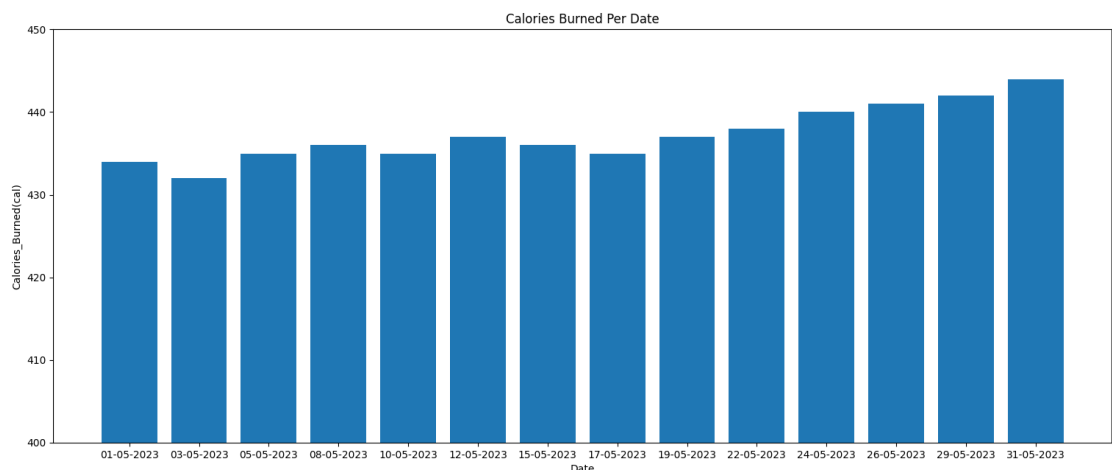
The following graph represents the evolution of my strokes per minute over time, using data from my iFIT application.

It can be observed that my performance was quite stable at the beginning of the period, with an average of 25 strokes per minute. However, from the fourth week, I was able to observe a slight progression, with an average of 26 strokes per minute. This improvement is significant and can be explained by several factors, such as better mastery of the rowing technique (in mid-May, I started watching YouTube videos to improve my posture) or an improvement in my physical condition. It is also possible that this improvement is due to a combination of these two factors. Note that:

- On days when I did not use my rower, I often went to Basic fit.
- I have one rest day per week.

## [Calories Burned per Date]

- Descriptive statistics:
  - Mean of the lost calories? 437.28 cal
  - Median of the lost calories? 436.5 cal
  - Standard deviation of the lost calories? 3.36 cal
- What is the total number of calories burned per week?
  - Week 1: 1301 cal
  - Week 2: 1308 cal
  - Week 3: 1308 cal
  - Week 4: 1319 cal
  - Week 5: 886 cal
- What is the total number of calories burned during the 5 weeks? 6122 cal
- Create a graph: Calories Burned per Date



The "Calories Burned Per Date" graph is a histogram that represents the number of calories burned per workout over time. It allows for a quick visualization of the evolution of the number of calories burned during the month of May 2023.

In this case, it can be observed that the number of burned calories is fairly stable during the first few weeks, with an average of around 437.28 calories per session. From the fourth week onwards, there is a slight increase in the number of calories burned, with an average of around 445 calories per session.

## [Distance]

- What is the total distance covered in 5 weeks? 9624km
- What is my average distance for the 5 weeks? 6.87km
- What is the variation of distance per week?

```
Week
1    NaN
2    0.04
3   -0.01
4    0.06
5    0.05
```

- Is there a correlation between the distance covered and the calories burned?

```
Distance(km)      1.000000      0.993958
Calories_Burned(cal) 0.993958      1.000000
```

The results show a strong correlation between these two variables, with a correlation coefficient of 0.993985

- In which week did I run more than 20.5km?

- In which week did I run more than 20.5km?

For week 1, you didn't run more than 20.5 km.

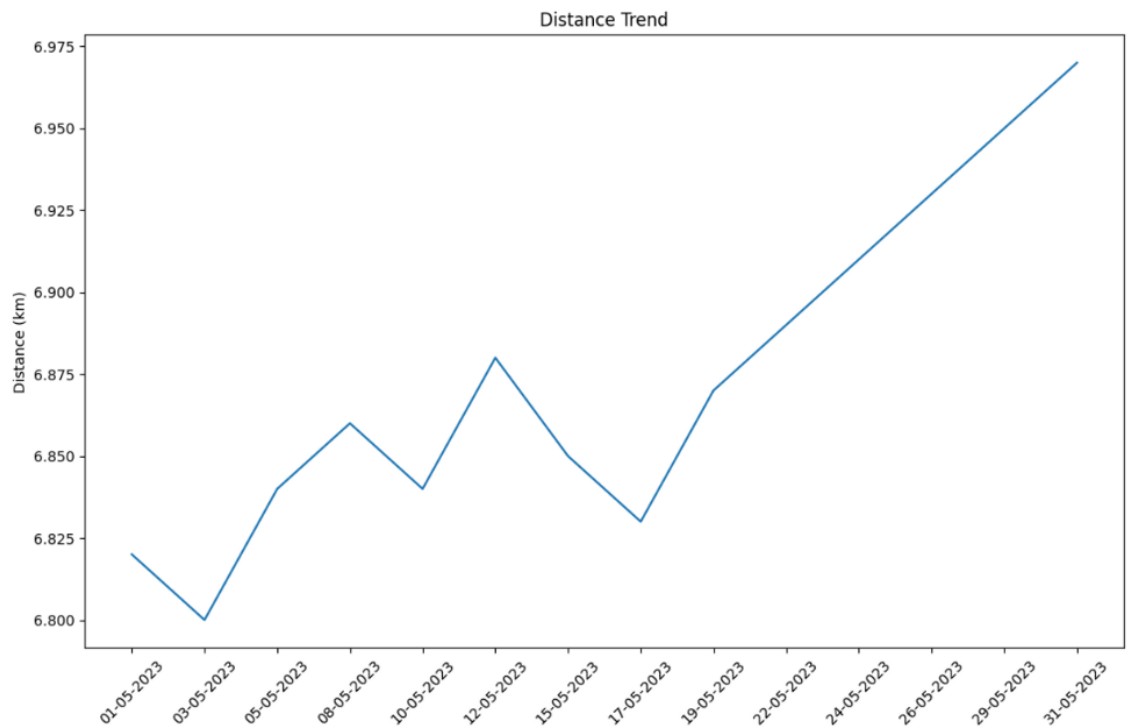
For week 2, you ran more than 20.5 km.

For week 3, you ran more than 20.5 km.

For week 4, you ran more than 20.5 km.

For week 5, you didn't run more than 20.5 km.

- Create a graph: Distance Trend



Upon closer examination of the graph, it can be observed that the distance traveled has slightly increased over time, with a more significant progression starting from the fourth week.

## Conclusion

Using the iFIT app to analyze my fitness data has provided me with valuable insights into my physical performance over time. The results show a positive trend in terms of rowing frequency, calories burned, and distance traveled, suggesting an improvement in my fitness level over the weeks. Analyzing this data has also helped identify correlations between certain variables, such as distance traveled and calories burned, which can help better understand the factors influencing my physical performance.

Finally, through online research, I learned that it is recommended to lose between 500 and 1000 calories per day for healthy weight loss. Since I lose an average of 437.28 calories per session, this means I should do about one session per day to reach this goal. It is important to note that weight loss depends on many factors such as body mass, age, gender, diet, etc.