BDAT 1006
Data Visualization

From Prototype to Tableau Dashboard

Assignment 2

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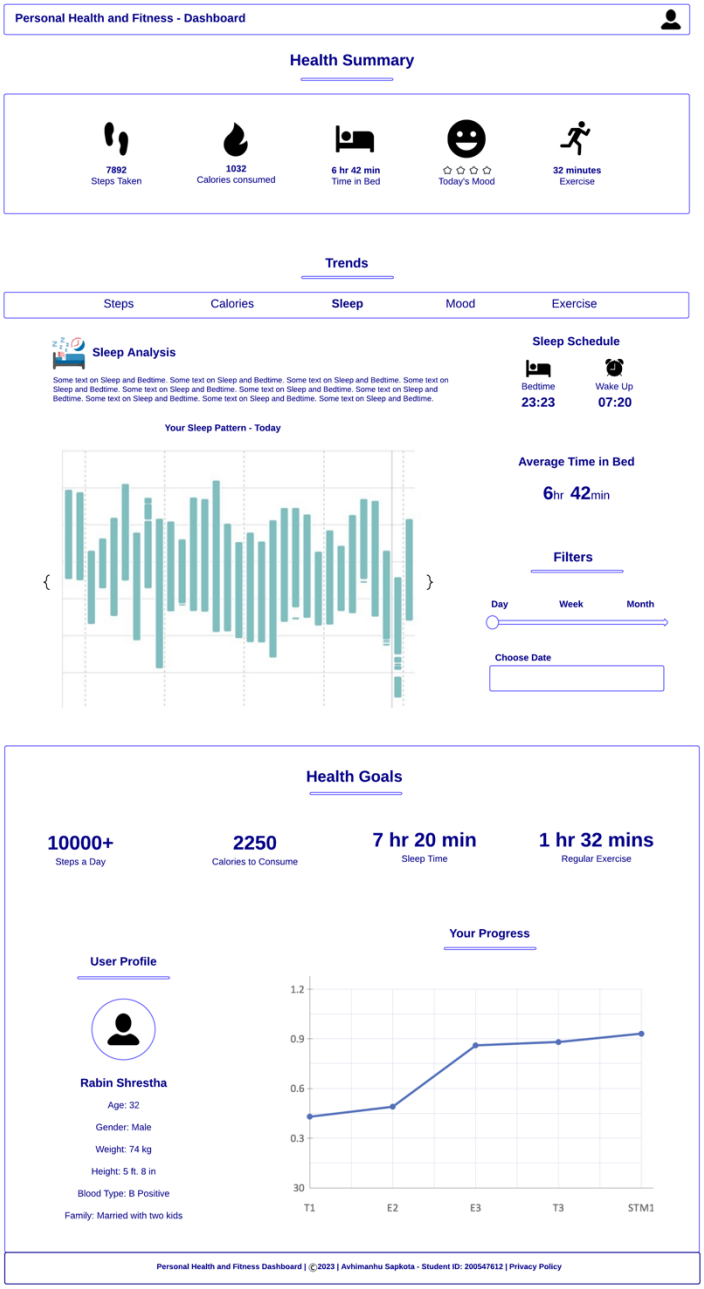
Prototype Designed in Assignment 1

The prototype dashboard presented below was designed in assignment 1 to provide an overview, of what the final product would look like, to the stakeholder. The following design undertook the Usability testing and some changes for the final prototype were proposed. Similarly, the design below is based on Mobile devices however, as per the requirement for assignment 3, the final dashboard designed has been presented in desktop design as requested. This report consists of some screenshots of the dashboard designed using Tableau.



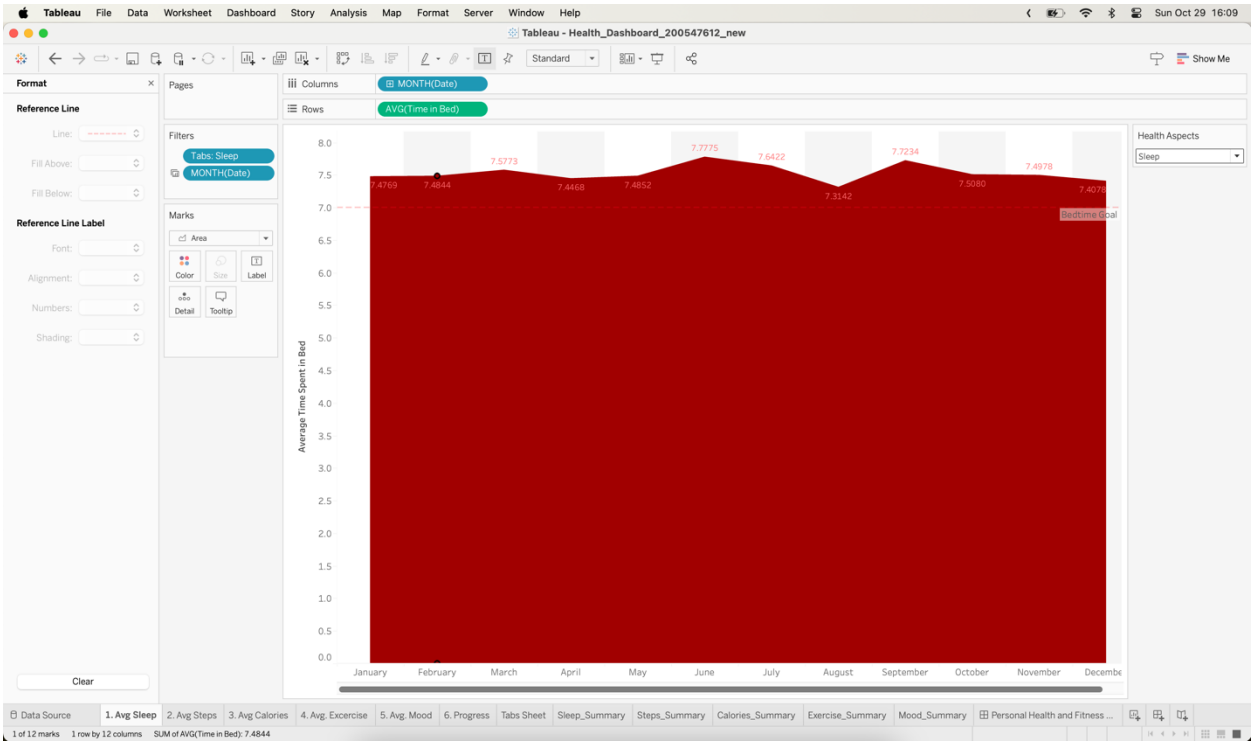
Data for Dashboard Development

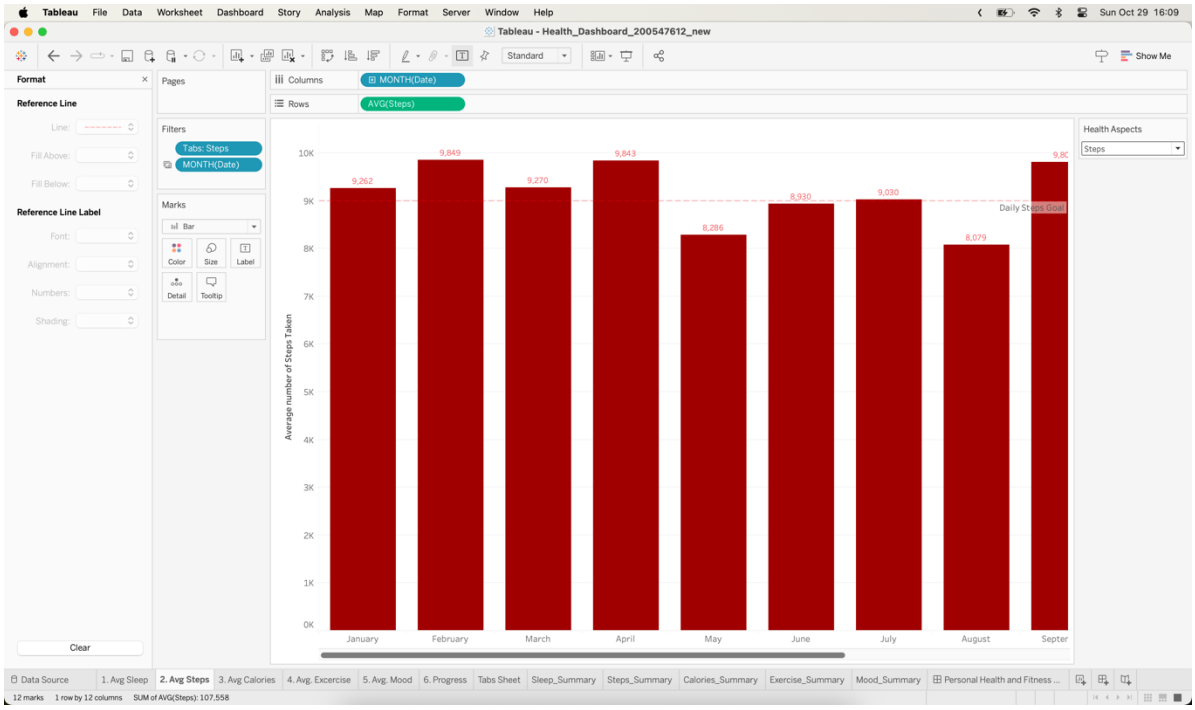
The specific data for Personal Health and Fitness Dashboard was not available as required anywhere. Hence, the data for the past year was generated with the help of python code that generated random mock data that could be used to create visuals for final dashboard. Presented below is the snapshot of the data generated.

Date	Steps	Calories	Time_in_Bed	Mood	Exercise	Daily_Score	Calculated_daily_score
01-Sep-22	9257	2398	8.118245949057728	3	34	112.2782459490577	8
02-Sep-22	8014	2664	8.245618624060668	5	1	106.60561862406068	7
03-Sep-22	12755	1684	8.355772711162578	4	11	147.2257727111626	12
04-Sep-22	9409	2495	8.302137154485848	3	15	116.36713715448585	8
05-Sep-22	7198	2642	6.148234785655064	3	57	88.63823478565506	5
06-Sep-22	7264	1937	6.463854817274504	5	49	88.88885482	5
07-Sep-22	14130	1866	6.481536260888752	5	43	157.81153626088877	13
08-Sep-22	7538	1733	7.006889946261841	4	37	91.35188994626182	5
09-Sep-22	4253	2583	7.478594354765113	4	44	62.523594354765116	2
10-Sep-22	3604	2093	8.668400069521036	4	46	54.57340006952103	1
11-Sep-22	14914	2876	8.510704358138245	5	47	172.33070435813823	14
12-Sep-22	9837	2822	6.913020334953426	5	13	123.09302033495344	9
13-Sep-22	11754	2627	8.548456365154475	2	27	138.5234563651545	11
14-Sep-22	11824	1645	8.088151834577907	4	52	133.35315183457791	10
15-Sep-22	14661	2282	6.586147106025652	3	43	163.30614710602566	13
16-Sep-22	12530	2588	8.225713393933056	4	32	147.26571339393308	12
17-Sep-22	4449	1675	7.407162909039448	4	15	62.77216290903945	2
18-Sep-22	11639	1953	8.777976689857828	5	9	139.03297668985783	11
19-Sep-22	9084	2466	7.433383727774714	1	31	108.50338372777472	7
20-Sep-22	5481	1570	8.172401032278376	1	33	68.53240103227839	3
21-Sep-22	6916	1910	6.284243375604924	3	60	81.99424337560492	4
22-Sep-22	14551	1845	8.692338445	4	3	167.12733844478296	14
23-Sep-22	9864	1666	8.355103021530578	2	58	111.52510302153058	8
24-Sep-22	8928	1770	6.3287811068879485	4	17	106.75878110688794	7
25-Sep-22	14841	2640	8.567835820881985	4	49	169.27783582088196	14
26-Sep-22	12781	2682	8.368147508000419	2	48	146.7881475080004	12
27-Sep-22	13637	2955	8.341032265179505	4	24	161.0860322651795	13
28-Sep-22	8025	2465	8.862712045001135	3	11	103.33771204500114	7
29-Sep-22	6713	2818	6.647543616536132	3	36	87.26754361653613	5
30-Sep-22	8344	1810	7.321347456	2	37	98.11134745584178	6
01-Oct-22	8656	2432	7.908154544981926	5	33	108.32815454498193	7
02-Oct-22	13527	1714	8.369045575109574	5	19	155.30904557510956	13
03-Oct-22	7789	2385	7.315203031522834	5	17	100.43020303152282	6
04-Oct-22	7432	2663	8.399757433680008	1	27	94.33475743	6
05-Oct-22	14931	2538	8.525201843998323	5	34	172.12520184399833	14
06-Oct-22	6447	2326	8.137655046661523	1	45	80.73765504666152	4
07-Oct-22	11369	1590	6.079636540855685	2	34	126.31963654085568	9
08-Oct-22	14029	1541	6.180721571584778	2	36	152.57572157158478	12

Tableau Visuals Created for Dashboard

The following screenshots are of individual visualizations that were created in order to incorporate them in the final dashboard which has been presented further in the report. These screenshots are provided to give overview on how the visuals and dashboard was developed at the end.





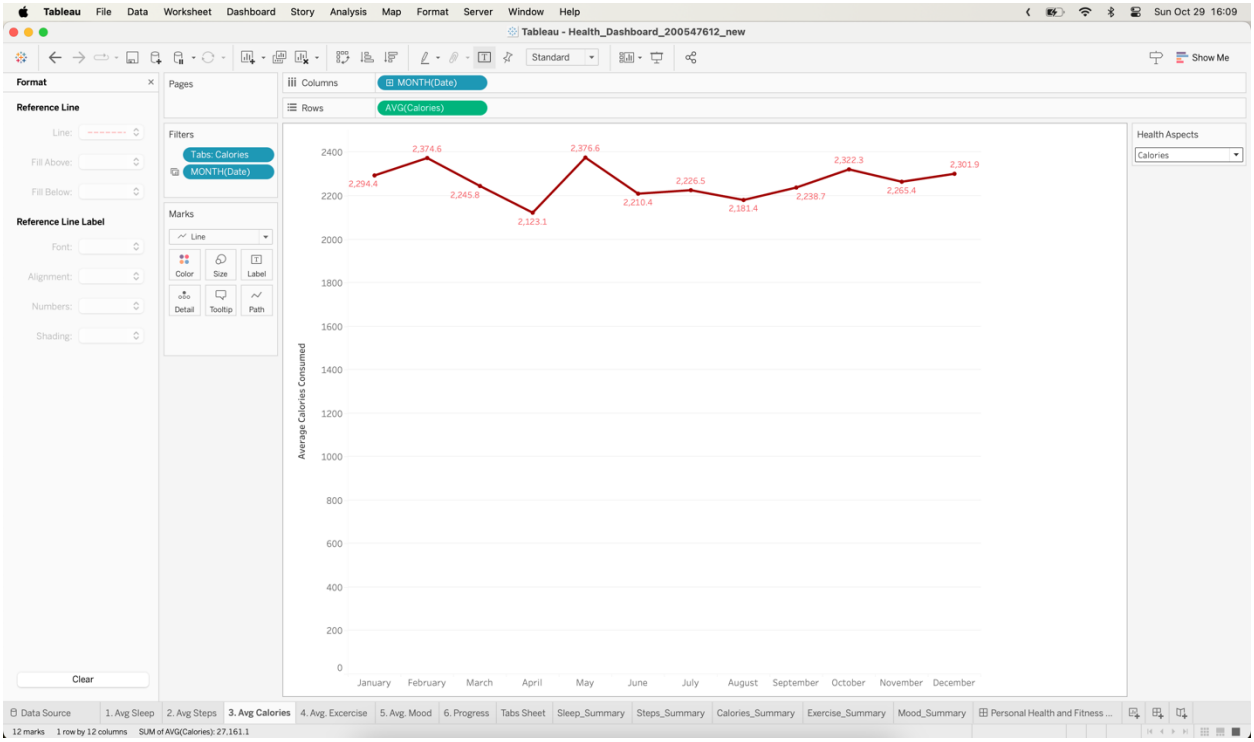


Tableau - Health_Dashboard_200547612_new
Columns MONTH(Date)
Rows AVG(Calories)
Filters Tabs: Calories, MONTH(Date)
Health Aspects
Calories
Average Calories Consumed
2,294.4
2,374.6
2,245.8
2,123.1
2,376.6
2,210.4
2,226.5
2,181.4
2,238.7
2,322.3
2,265.4
2,301.9
January February March April May June July August September October November December

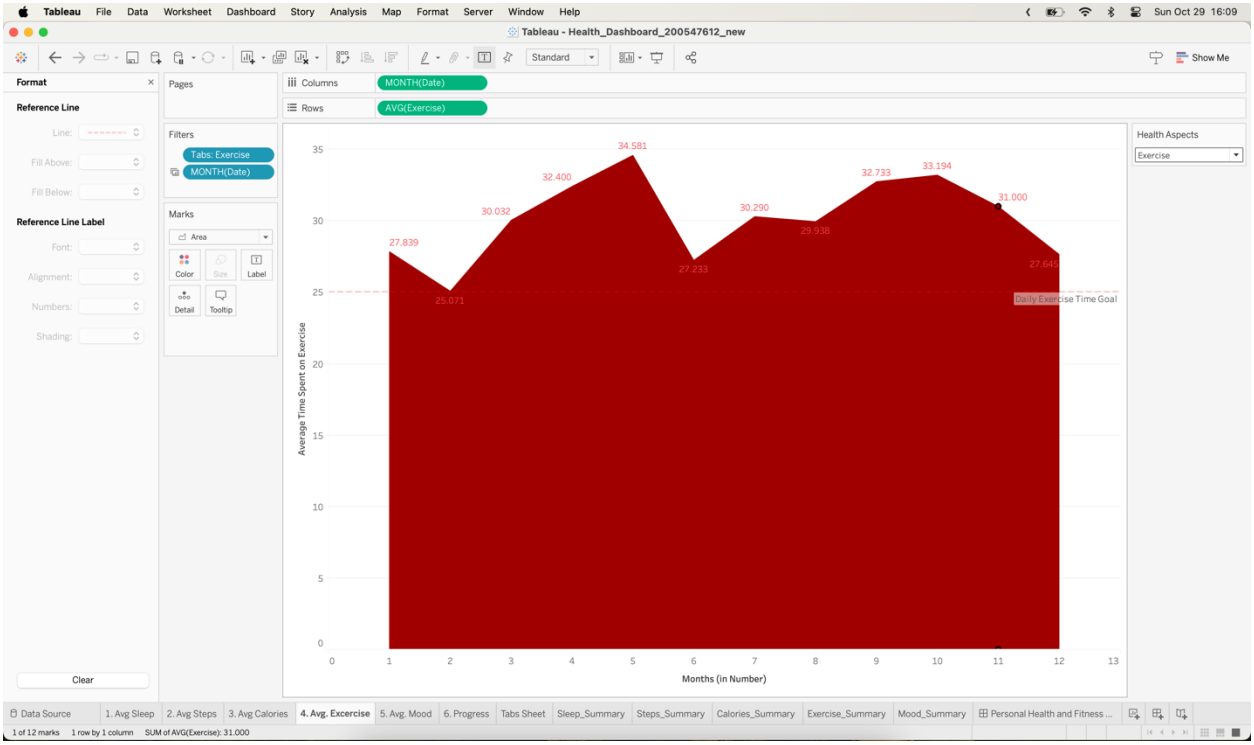


Tableau - Health_Dashboard_200547612_new
Columns MONTH(Date)
Rows AVG(Exercise)
Filters Tabs: Exercise, MONTH(Date)
Health Aspects
Exercise
Average Time Spent on Exercise
27.839
25.071
30.032
32.400
34.581
27.233
30.290
29.938
32.733
33.194
31.000
27.645
Daily Exercise Time Goal
Months (in Number)

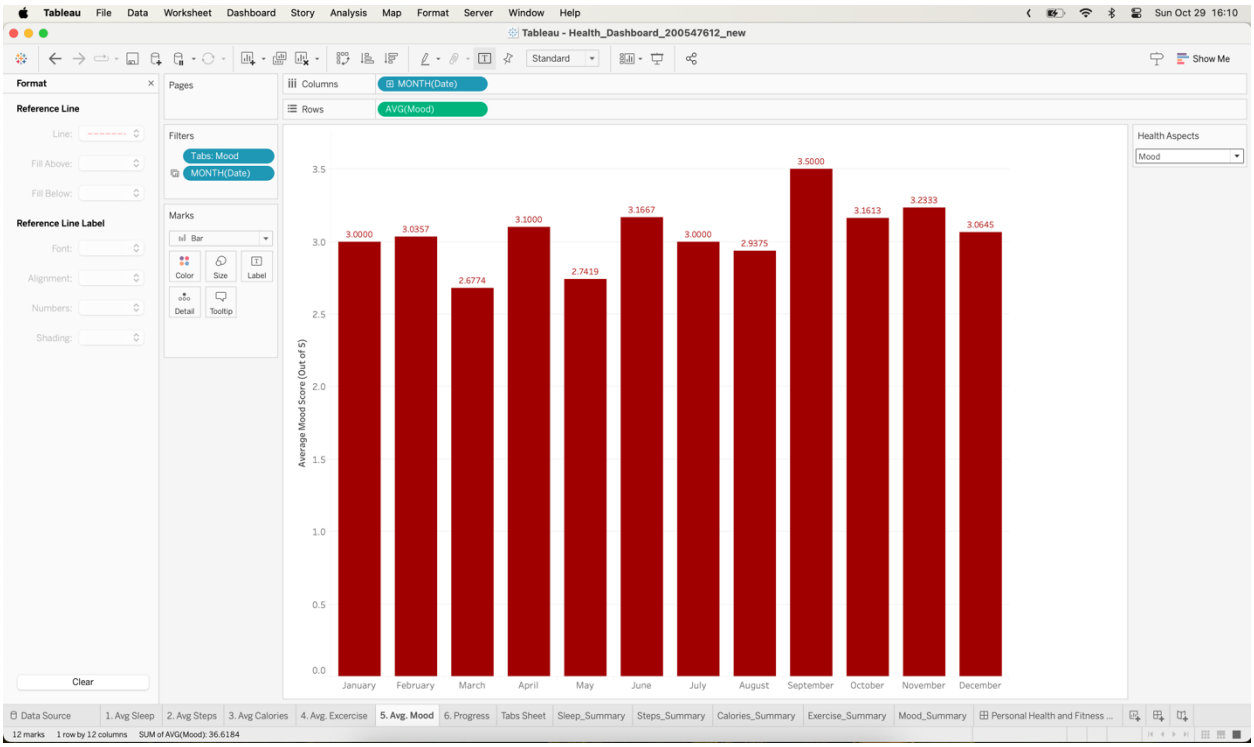


Tableau - Health_Dashboard_200547612_new
Columns
MONTH(Date)
Rows
AVG(Mood)
Health Aspects
Mood
Average Mood Score (Out of 5)
3.0000
3.0357
2.6774
3.1000
2.7419
3.1667
3.0000
2.9375
3.5000
3.1613
3.2333
3.0645
January
February
March
April
May
June
July
August
September
October
November
December

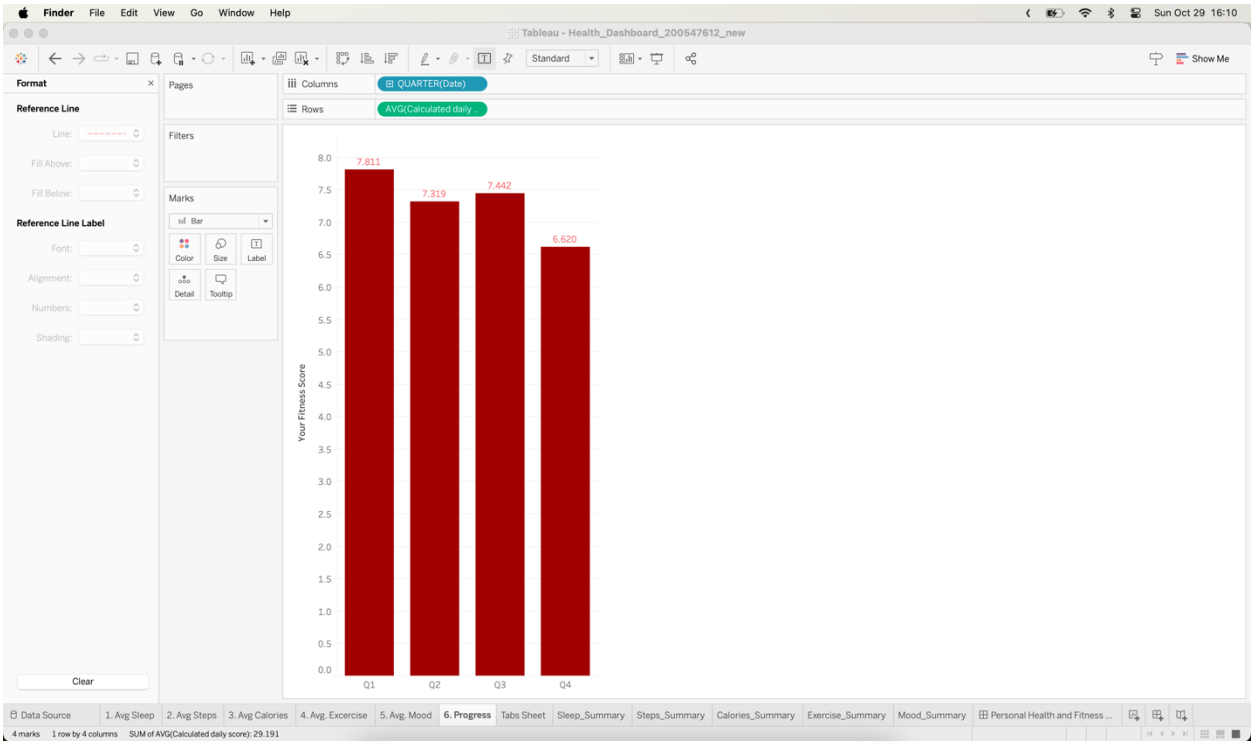


Tableau - Health_Dashboard_200547612_new
Columns
QUARTER(Date)
Rows
AVG(Calculated daily ...
Your Fitness Score
7.811
7.319
7.442
6.620
Q1
Q2
Q3
Q4

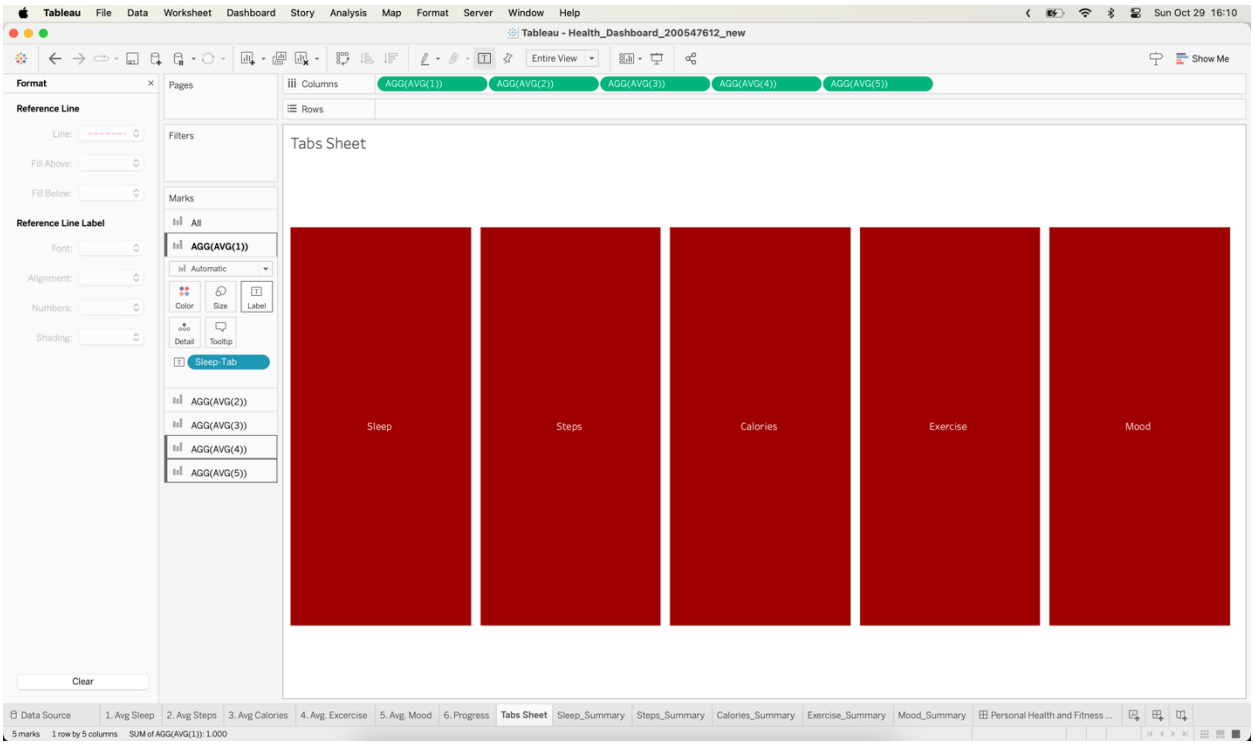
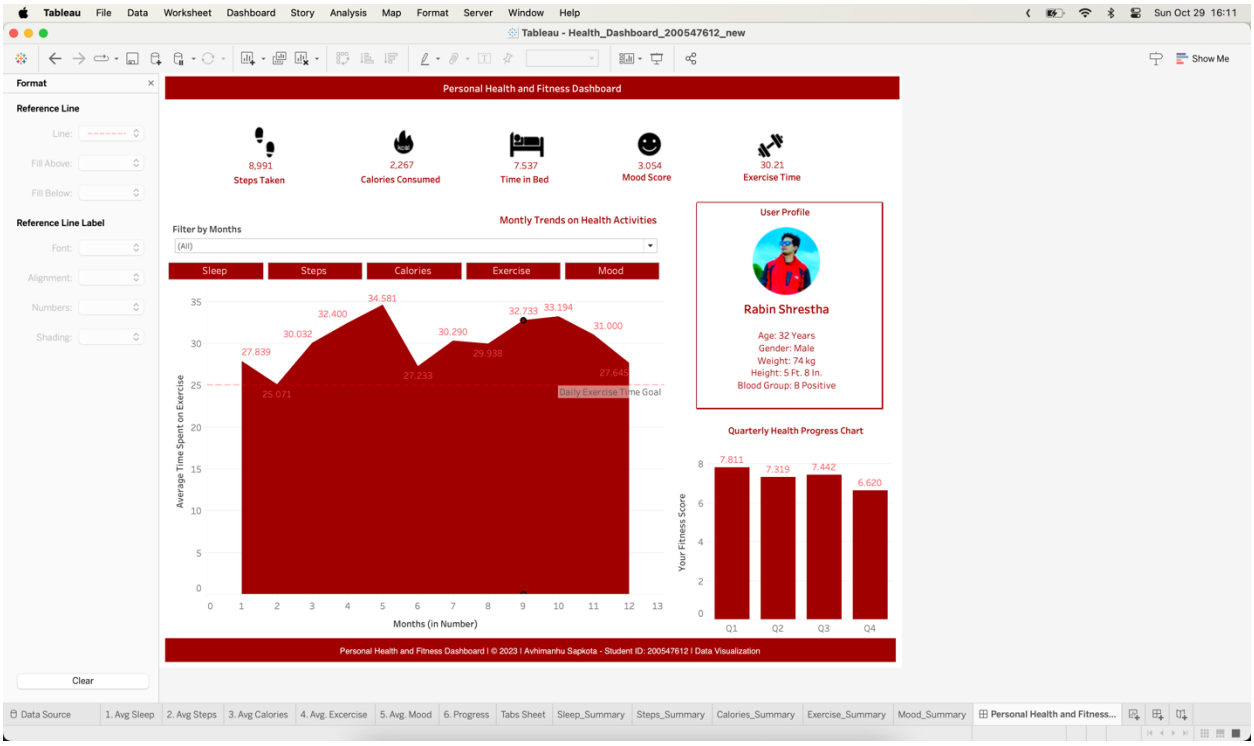


Tableau - Health_Dashboard_200547612_new
Tabs Sheet
Sleep
Steps
Calories
Exercise
Mood

Tableau Dashboard Designed

Below are some screenshots from the tableau dashboard designed for 'Personal Health and Fitness' as designed in assignment 1. In order to get detailed insights into the dynamic filtering and selection functionality in the dashboard, please go through the tableau file attached along with the assignment.



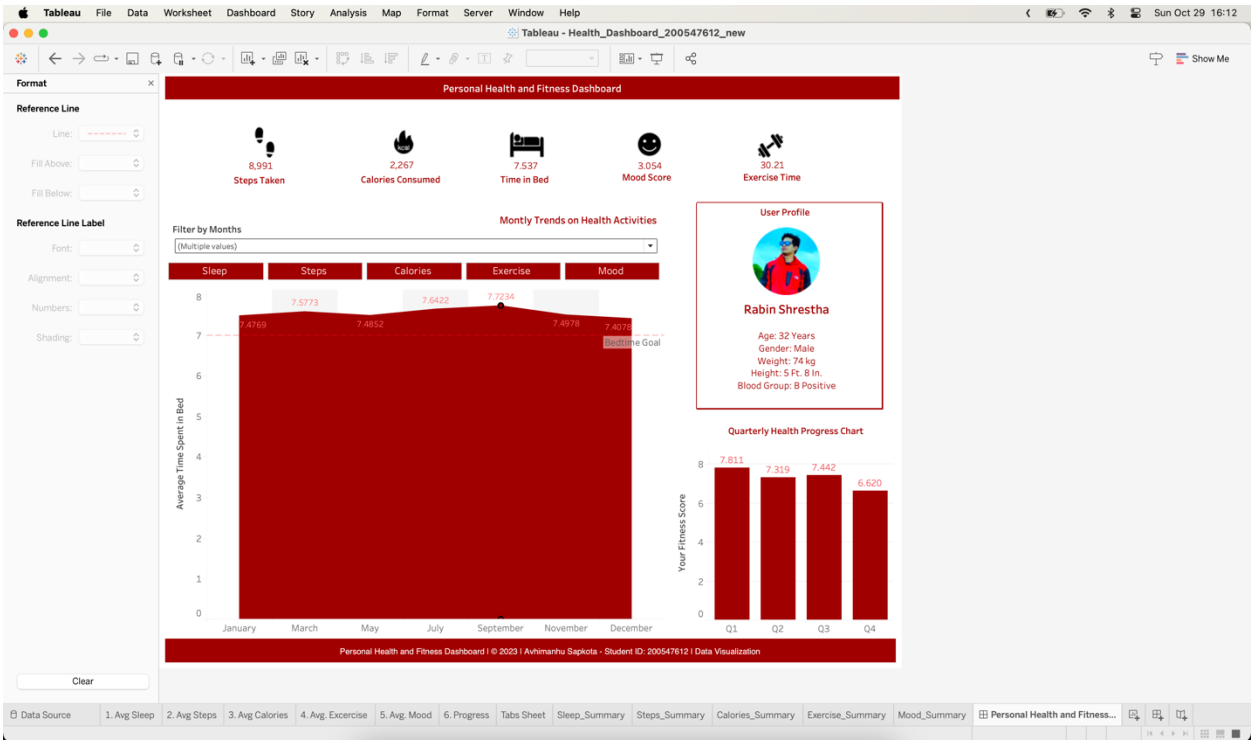


Tableau - Health_Dashboard_200547612_new
Personal Health and Fitness Dashboard
8,991
Steps Taken
2,267
Calories Consumed
7.537
Time in Bed
3.054
Mood Score
30.21
Exercise Time
Montly Trends on Health Activities
Filter by Months
(Multiple values)
Sleep
Steps
Calories
Exercise
Mood
Average Time Spent in Bed
January
March
May
July
September
November
December
Bedtime Goal
User Profile
Rabin Shrestha
Age: 32 Years
Gender: Male
Weight: 74 kg
Height: 5 Ft. 8 In.
Blood Group: B Positive
Quarterly Health Progress Chart
Your Fitness Score
7.811
7.319
7.442
6.620
Q1
Q2
Q3
Q4
Personal Health and Fitness Dashboard I © 2023 I Avhimanhu Sapkota - Student ID: 200547612 I Data Visualization

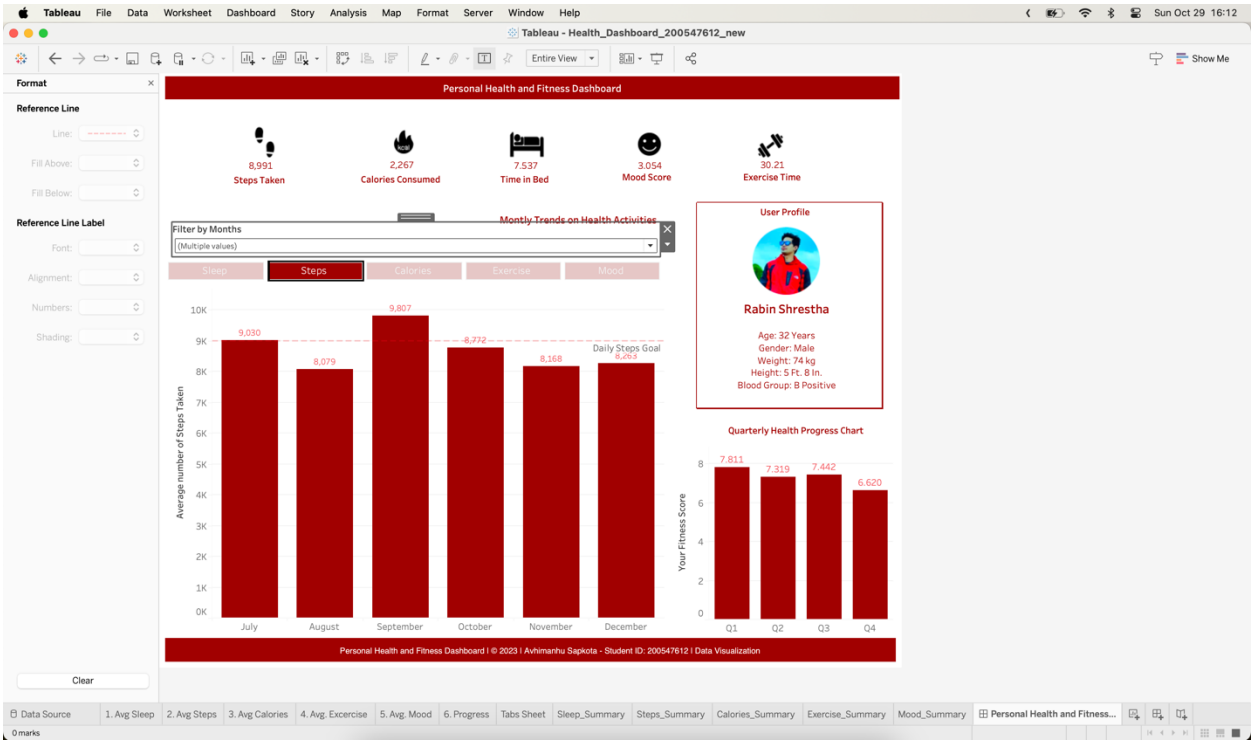


Tableau - Health_Dashboard_200547612_new
Personal Health and Fitness Dashboard
8,991
Steps Taken
2,267
Calories Consumed
7.537
Time in Bed
3.054
Mood Score
30.21
Exercise Time
Montly Trends on Health Activities
Filter by Months
(Multiple values)
Sleep
Steps
Calories
Exercise
Mood
Average number of Steps Taken
July
August
September
October
November
December
Daily Steps Goal
User Profile
Rabin Shrestha
Age: 32 Years
Gender: Male
Weight: 74 kg
Height: 5 Ft. 8 In.
Blood Group: B Positive
Quarterly Health Progress Chart
Your Fitness Score
7.811
7.319
7.442
6.620
Q1
Q2
Q3
Q4
Personal Health and Fitness Dashboard I © 2023 I Avhimanhu Sapkota - Student ID: 200547612 I Data Visualization

Conclusion

The development of the 'Personal Health and Fitness' Tableau Dashboard involved a phased approach from a prototype to the final design. Through iterative testing and adjustments, the dashboard evolved, accommodating a transition from mobile-oriented to desktop-oriented design as per project specifications. Despite the challenge of unavailable specific data, a Python-generated mock dataset was utilized, enabling the creation of insightful visualizations. The final dashboard, equipped with dynamic filtering and selection capabilities, presents a user-friendly interface for comprehensive data exploration.

Achievement

The completion of the 'Personal Health and Fitness' Tableau Dashboard signifies a successful integration of Tableau's features and functionalities. It serves as a tool for effective data visualization, offering users an intuitive platform to monitor and analyze health and fitness metrics. This achievement demonstrates the effective utilization of Tableau's capabilities in constructing a dynamic and interactive dashboard, providing a valuable resource for informed decision-making and analysis in the health and fitness domain.