

Fitness Dashboard

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Data Collection and Cleaning

- **Data Source Description:** Describe the dataset you're using, including its origin, structure, and key features such as physical activity, heart rate, and sleep data.
- **Data Cleaning Process:** Explain the steps you will take to clean the data, such as handling missing values, removing duplicates, and correcting anomalies.
- **Data Preparation:** Discuss any transformations or feature engineering you'll perform to prepare the data for analysis, like normalizing data, creating new variables, or encoding categorical variables.

	A	B	C	D	E	F	G	H	I
1	Id	ActivityDate	TotalSteps	TotalDistance	TrackerDistance	LoggedActivitiesDistance	VeryActiveDistance	ModeratelyActiveDistance	LightActiveDistance
2	1503960366	4/12/2016	13162	8.5	8.5	0	1.87999995	0.55000012	6.059999943
3	1503960366	4/13/2016	10735	6.96999979	6.96999979	0	1.570000052	0.689999998	4.710000038
4	1503960366	4/14/2016	10460	6.739999771	6.739999771	0	2.440000057	0.400000006	3.910000086
5	1503960366	4/15/2016	9762	6.280000021	6.280000021	0	2.140000105	1.25999999	2.829999924
6	1503960366	4/16/2016	12669	8.159999847	8.159999847	0	2.710000038	0.409999996	5.039999962
7	1503960366	4/17/2016	9705	6.480000019	6.480000019	0	3.190000057	0.779999971	2.50999999
8	1503960366	4/18/2016	13019	8.590000153	8.590000153	0	3.25	0.639999986	4.710000038
9	1503960366	4/19/2016	15506	9.880000114	9.880000114	0	3.529999971	1.320000052	5.030000021
10	1503960366	4/20/2016	10544	6.679999828	6.679999828	0	1.960000038	0.479999989	4.239999771
11	1503960366	4/21/2016	9819	6.340000153	6.340000153	0	1.340000033	0.349999994	4.650000095
12	1503960366	4/22/2016	12764	8.130000114	8.130000114	0	4.760000229	1.120000005	2.240000001
13	1503960366	4/23/2016	14371	9.039999962	9.039999962	0	2.809999943	0.870000005	5.360000134
14	1503960366	4/24/2016	10039	6.409999847	6.409999847	0	2.920000076	0.209999993	3.279999971

Daily Activities

	A	B	C	D	E	F
1	Id	date	Hour	Average Heart Rate	Daily_avg	
2	2022484408	4/12/2016	7	83.2	75.80417701	
3	2022484408	4/12/2016	8	68.56200528	75.80417701	
4	2022484408	4/12/2016	9	66.40469974	75.80417701	
5	2022484408	4/12/2016	10	106.7160752	75.80417701	
6	2022484408	4/12/2016	11	67.76715686	75.80417701	
7	2022484408	4/12/2016	12	66.23056995	75.80417701	
8	2022484408	4/12/2016	13	83.6875	75.80417701	
9	2022484408	4/12/2016	14	80.57709251	75.80417701	
10	2022484408	4/12/2016	15	68.32692308	75.80417701	
11	2022484408	4/12/2016	16	71.02163462	75.80417701	
12	2022484408	4/12/2016	17	69.94103774	75.80417701	
13	2022484408	4/12/2016	18	76.37301587	75.80417701	

Heart Rate

	A	B	C	D	E	F	G
1	Id	Calories	Date	Hours	TotalIntensity	AverageIntensity	StepTotal
2	1503960366	81	4/12/2016	0	20	0.333333	373
3	1503960366	61	4/12/2016	1	8	0.133333	160
4	1503960366	59	4/12/2016	2	7	0.116667	151
5	1503960366	47	4/12/2016	3	0	0	0
6	1503960366	48	4/12/2016	4	0	0	0
7	1503960366	48	4/12/2016	5	0	0	0
8	1503960366	48	4/12/2016	6	0	0	0
9	1503960366	47	4/12/2016	7	0	0	0
10	1503960366	68	4/12/2016	8	13	0.216667	250
11	1503960366	141	4/12/2016	9	30	0.5	1864
12	1503960366	99	4/12/2016	10	29	0.483333	676

Hourly Stats

	A	B	C	D	E	F	G	H	I
1	Id	WeightKg	WeightPounds	Fat	BMI	IsManualReport	LogId	date	Time
2	1503960366	52.6	115.96	22	22.65	TRUE	1.46E+12	5/2/2016	23:59:59
3	1503960366	52.6	115.96	0	22.65	TRUE	1.46E+12	5/3/2016	23:59:59
4	1927972279	133.5	294.32	0	47.54	FALSE	1.46E+12	4/13/2016	1:08:52
5	2873212765	56.7	125	0	21.45	TRUE	1.46E+12	4/21/2016	23:59:59
5	2873212765	57.3	126.32	0	21.69	TRUE	1.46E+12	5/12/2016	23:59:59
7	4319703577	72.4	159.61	25	27.45	TRUE	1.46E+12	4/17/2016	23:59:59
3	4319703577	72.3	159.39	0	27.38	TRUE	1.46E+12	5/4/2016	23:59:59
9	4558609924	69.7	153.66	0	27.25	TRUE	1.46E+12	4/18/2016	23:59:59
0	4558609924	70.3	154.98	0	27.46	TRUE	1.46E+12	4/25/2016	23:59:59
1	4558609924	69.9	154.1	0	27.32	TRUE	1.46E+12	5/1/2016	23:59:59
2	4558609924	69.2	152.56	0	27.04	TRUE	1.46E+12	5/2/2016	23:59:59
3	4558609924	69.1	152.34	0	27	TRUE	1.46E+12	5/9/2016	23:59:59

Weight Stats

	A	B	C	D	E	F	G	H
1	Id	Calories	Date	Hour	Minute	Intensity	METs	Steps
2	1503960366	0.786499977	4/12/2016	0	0	0	10	0
3	1503960366	0.786499977	4/12/2016	0	1	0	10	0
4	1503960366	0.786499977	4/12/2016	0	2	0	10	0
5	1503960366	0.786499977	4/12/2016	0	3	0	10	0
6	1503960366	0.786499977	4/12/2016	0	4	0	10	0
7	1503960366	0.943799973	4/12/2016	0	5	0	12	0
8	1503960366	0.943799973	4/12/2016	0	6	0	12	0
9	1503960366	0.943799973	4/12/2016	0	7	0	12	0
10	1503960366	0.943799973	4/12/2016	0	8	0	12	0
11	1503960366	0.943799973	4/12/2016	0	9	0	12	0
12	1503960366	0.943799973	4/12/2016	0	10	0	12	0

Minutes Stats

	A	B	C	D	E	F	G	H
1	Id	date	TotalSleepRecords	TotalMinutesAsleep	TotalTimeInBed	Time	value	logId
2	1503960366	4/12/2016	1	327	346	0:00:00	3	11380564589
3	1503960366	4/12/2016	1	327	346	0:00:00	2	11380564589
4	1503960366	4/12/2016	1	327	346	0:00:00	1	11380564589
5	1503960366	4/13/2016	2	384	407	0:00:00	1	11388770715
5	1503960366	4/13/2016	2	384	407	0:00:00	3	11388770715
7	1503960366	4/13/2016	2	384	407	0:00:00	2	11388770715
3	1503960366	4/13/2016	2	384	407	0:00:00	1	11388770716
9	1503960366	4/15/2016	1	412	442	0:00:00	3	11402722600
0	1503960366	4/15/2016	1	412	442	0:00:00	2	11402722600
1	1503960366	4/15/2016	1	412	442	0:00:00	1	11402722600
2	1503960366	4/16/2016	2	340	367	0:00:00	3	11421831252
3	1503960366	4/16/2016	2	340	367	0:00:00	1	11421831252

Sleeping Stats

Exploratory Data Analysis (EDA)

- **Descriptive Statistics:** Begin with an overview of the distribution of physical activity, heart rate, and sleep monitoring data using summary statistics and visualizations.
- **Trend Identification:** Identify and document any noticeable patterns or anomalies in the data, using visual aids like histograms, box plots, or time series plots.

Consumer Behavior Trends Analysis

- **Trend Analysis:** Analyze trends in physical activity, heart rate, and sleep patterns, focusing on peak activity times, common sleep durations, and heart rate variations.
- **Demographic Variations:** Investigate how these trends differ across various demographic groups, if applicable, such as age or gender.
- **Behavioral Insights:** Summarize the insights gained from these trends and their potential implications for consumer behavior.

Implications for Customers

- **Health Impact Analysis:** Discuss what the identified trends mean for users' health and wellness, backed by your analysis.
- **Lifestyle Recommendations:** Suggest how users might optimize their Fitbit usage to improve health outcomes based on the trends.
- **Potential Challenges:** Address any challenges or limitations that Fitbit users might face in adapting to these trends.

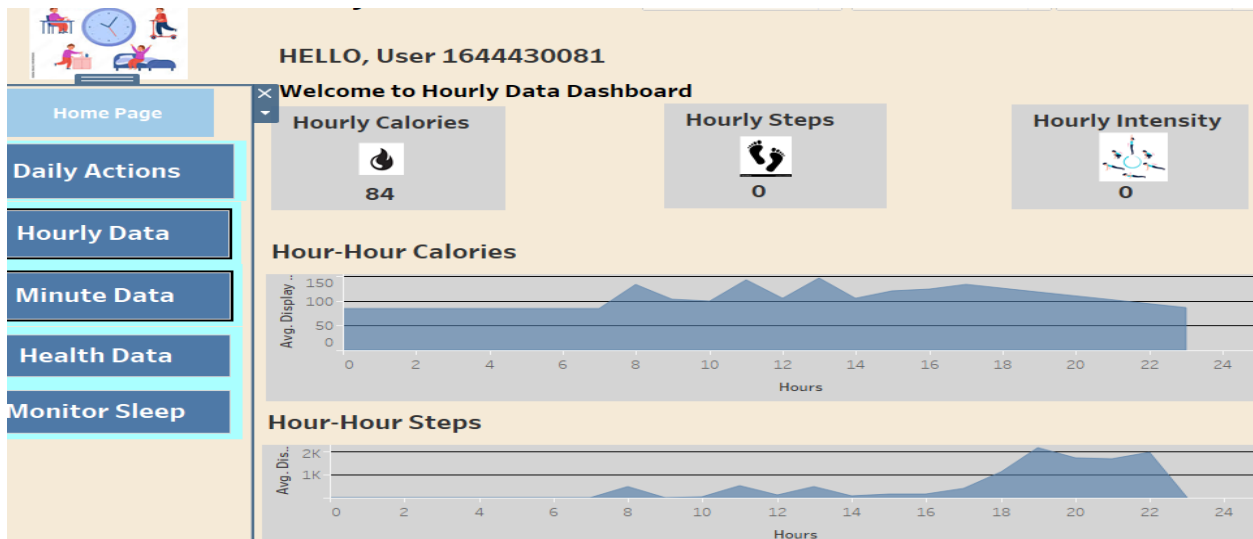
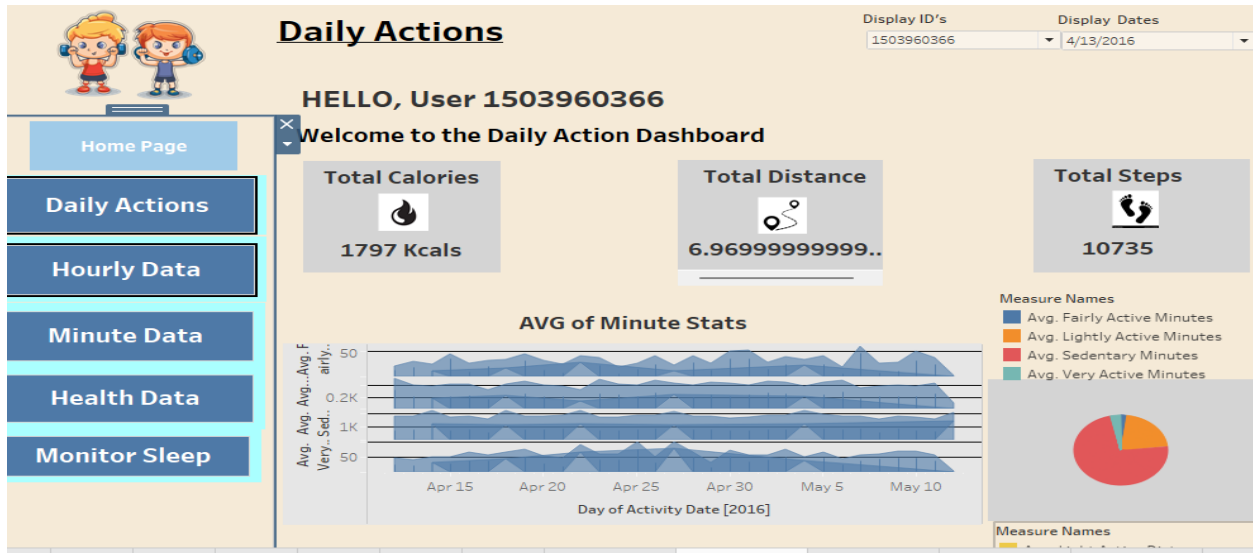
Visualization and Tableau Dashboard

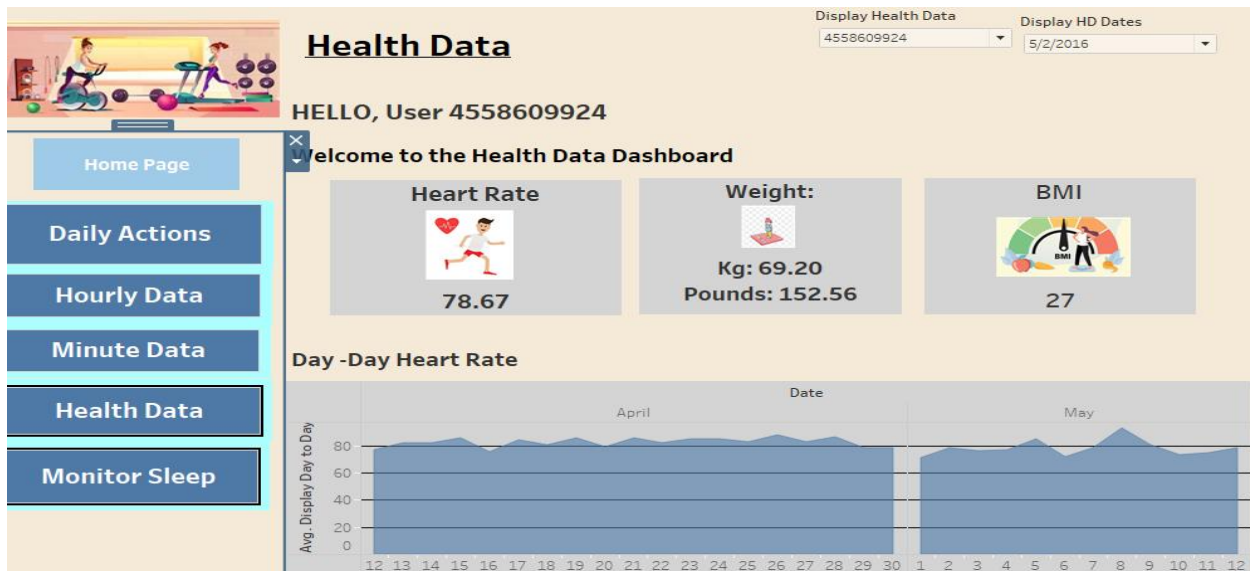
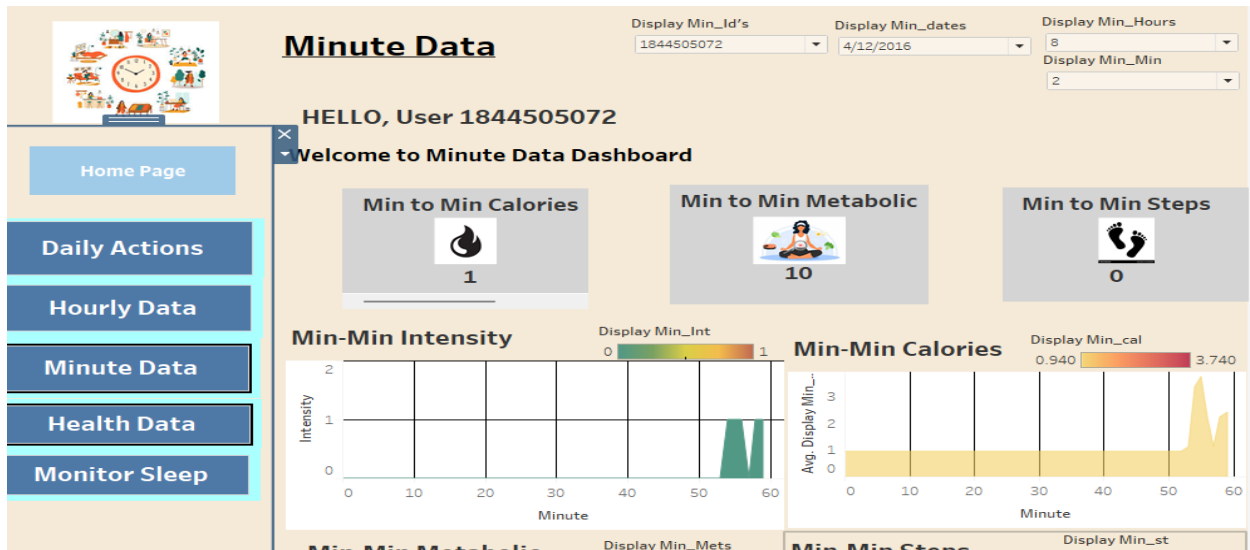
- **Visualization Planning:** Plan the key visualizations that will be included in your Tableau dashboard, ensuring they effectively convey the trends and insights discovered.
- **Dashboard Design:** Design the dashboard to be user-friendly and visually appealing, using appropriate charts and graphs.
- **Integration of Insights:** Ensure that all key findings and recommendations are clearly represented on the dashboard for easy interpretation.

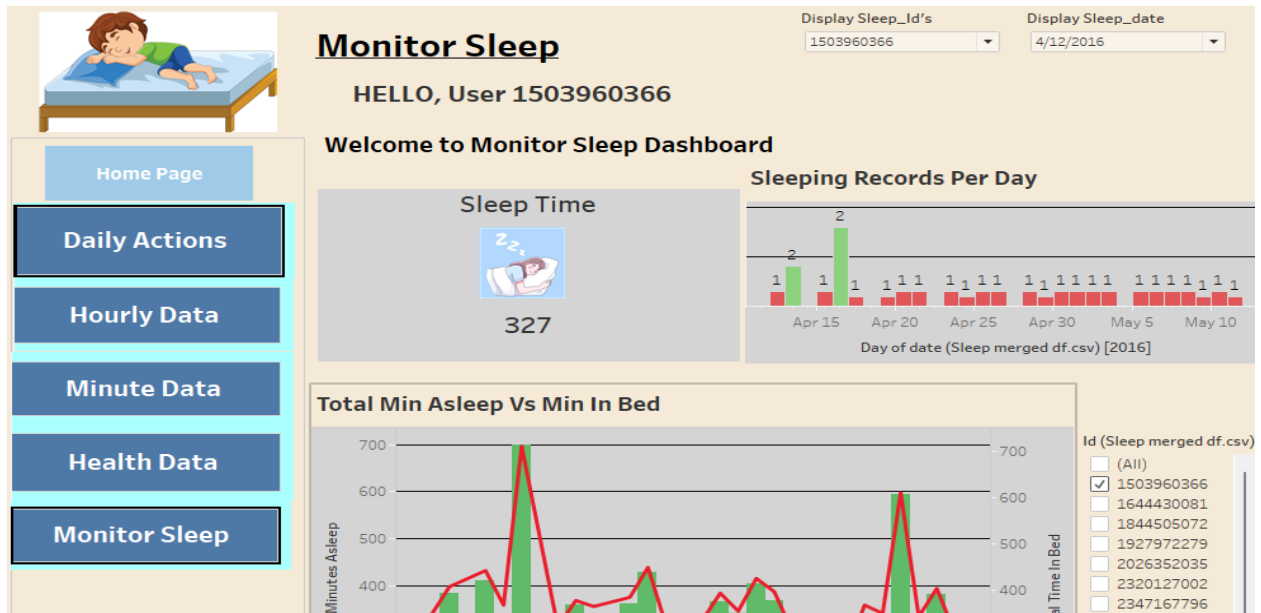
Public Dashboard:

https://public.tableau.com/app/profile/kona.vagadheeswari/viz/FitnessDashboard_17240811643300/Dashboard1









Conclusion and Final Report Compilation

- **Summary of Findings:** Provide a brief summary of the key insights and conclusions drawn from your analysis.
- **Final Recommendations:** Restate the marketing strategies and customer implications, emphasizing their importance.
- **Document Formatting:** Ensure the Word document is well-structured, with consistent formatting, headings, and clear visuals.