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# Improving your Work Life Balance

Monitoring 2 weeks in life of Carsten Hennig

Structured Approach to Data Analytics

*Ask Prepare Process Analyze Share Act*

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# Carsten Hennig

Monitoring 2 weeks of work-life balance of  
Mr Carsten Hennig, a Full Stack Developer  
and Digital Evangelist

## About:

52 years

Married, 1 child

100% working on remote

25+ years career as editor-in-chief

Since 6+ years Digital Evangelist

Since 2+ years MERN Full Stack Developer, working as Software Engineer

Studying Data Analytics at Turing College

5 languages: German, English, French, Spanish, Russian, Chinese/Mandarin

Tech stack: HTML, CSS, JavaScript, TypeScript, React, Angular, Svelte, Python, Go, SQL, Git, GitHub





# 1. Ask

**Two types** of questions to catch the situation and problem:

## → Starter thoughts

What are the key factors for your good work-life balance?  
What are your personal goals in your career and private life in the next 12-24 months?  
Which key factors do you want to reduce?  
Which key factors do you want to increase?.

## → Effective questions

Weights the key factors: 1 - very weak, 5 - very strong\*  
Which is the relationship between the key factors?  
Which influences can affect or reinforce the key factors?  
How strong is the motivation in general for change/improvement in a) career, b) personal life? (1 - very weak, 5 - very strong\*)

\*

1 - very weak, 2 - weak  
3 - neither weak nor strong  
4 - strong, 5 - very strong

## 2. Prepare

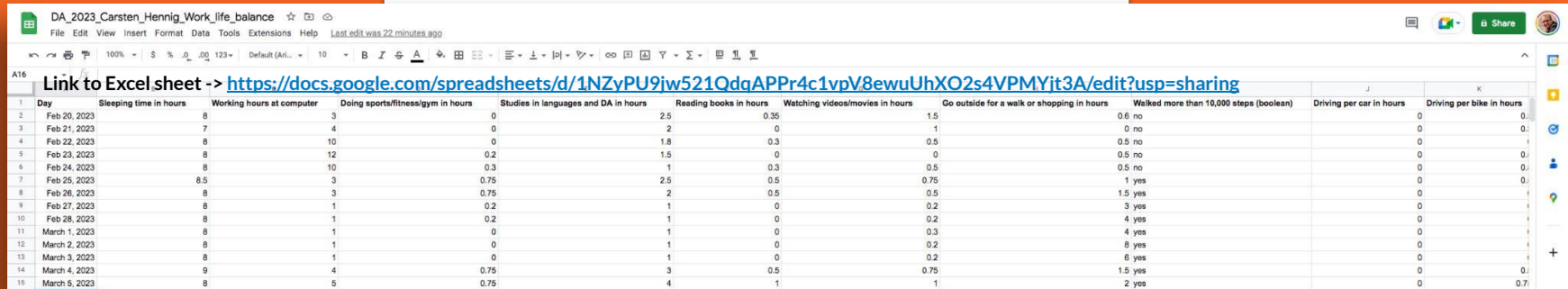
Collect data by monitoring daily work-life balance:

→ **15 data columns**

Monitoring hours of work, fitness, private life, having f&b etc.

→ **Extracted for BigQuery**

Imported as .csv file in Google's BigQuery console for SQL queries



DA\_2023\_Carsten\_Hennig\_Work\_life\_balance

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Link to Excel sheet -> <https://docs.google.com/spreadsheets/d/1NZyPU9jw521QdqAPPr4c1vpV8ewuUhXO2s4VPMYjt3A/edit?usp=sharing>

Day	Sleeping time in hours	Working hours at computer	Doing sports/fitness/gym in hours	Studies in languages and DA in hours	Reading books in hours	Watching videos/movies in hours	Go outside for a walk or shopping in hours	Walked more than 10,000 steps (boolean)	Driving per car in hours	Driving per bike in hours
Feb 20, 2023	8	3	0	2.5	0.35	1.5	0.6 no	0	0	0
Feb 21, 2023	7	4	0	2	0	0	0 no	0	0	0
Feb 22, 2023	8	10	0	1.8	0.3	0.5	0.5 no	0	0	0
Feb 23, 2023	8	12	0.2	1.5	0	0	0.5 no	0	0	0
Feb 24, 2023	8	10	0.3	1	0.3	0.5	0.5 no	0	0	0
Feb 25, 2023	8.5	3	0.75	2.5	0.5	0.75	1 yes	0	0	0
Feb 26, 2023	8	3	0.75	2	0.5	0.5	1.5 yes	0	0	0
Feb 27, 2023	8	1	0.2	1	0	0.2	3 yes	0	0	0
Feb 28, 2023	8	1	0.2	1	0	0.2	4 yes	0	0	0
March 1, 2023	8	1	0	1	0	0.3	4 yes	0	0	0
March 2, 2023	8	1	0	1	0	0.2	8 yes	0	0	0
March 3, 2023	8	1	0	1	0	0.2	6 yes	0	0	0
March 4, 2023	9	4	0.75	3	0.5	0.75	1.5 yes	0	0	0
March 5, 2023	8	5	0.75	4	1	1	2 yes	0	0	0.7

# Monitoring daily data

Day	Sleeping time in hours	Working hours at computer	Doing sports/fitness/gym in hours	Studies in languages and DA in hours	Reading books in hours	Watching videos/m
Feb 20, 2023	8	3	0	2.5	0.35	
Feb 21, 2023	7	4	0	2	0	
Feb 22, 2023	8	10	0	1.8	0.3	
Feb 23, 2023				1.5	0	
Feb 24, 2023				1	0.3	
Feb 25, 2023						
Feb 26, 2023						
Feb 27, 2023						
Feb 28, 2023						
March 1, 2023						
March 2, 2023						
March 3, 2023						
March 4, 2023						
March 5, 2023						

Sleeping time in hours.

Working hours at computer.

Doing sports/fitness/gym in hours.

Studies in language and DA in hours.

Reading books in hours.

Watching videos/m.

Walking more than 10,000 steps (boolean).

Driving per car in hours.

Driving per bike in hours.

Number of cups of coffee.

Drinking non-mineral water in liters.

## About data

Most columns are in hours, some in integers, some in numbers and a few as booleans - it should be comfortable for comparisons and relations between the data columns and rows.





## 3. Process

Strong restrictions for use of personal data:



### Authorization

Only authorized analysts and scientists are allowed to work with the data set.



### Data management

Data set will be deleted completely from BigQuery and .csv files from computers after finishing the DA project

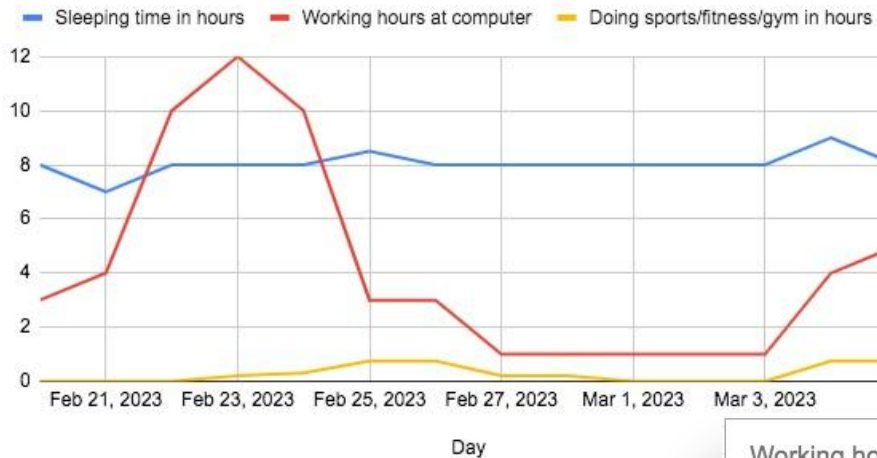


## 4. Analyze

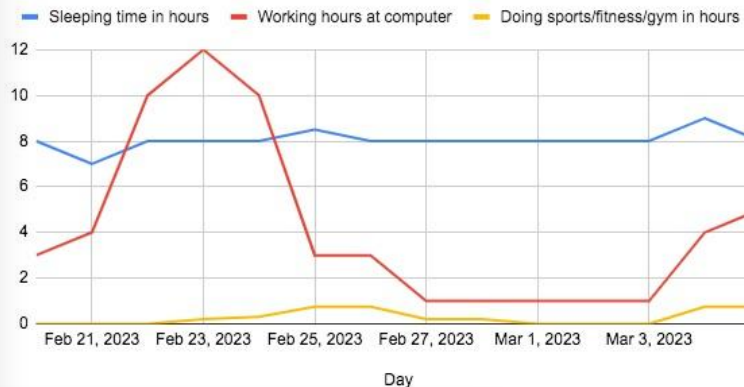
Structured approach:

- **SQL queries in BigQuery**  
Several 'Counts' and 'Where' queries
- **Google Excel Charts**  
Graphical representations
- **Manual comparison**  
Specific key findings

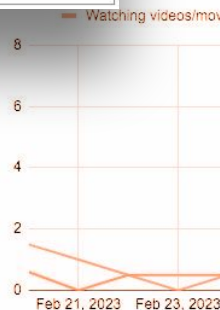
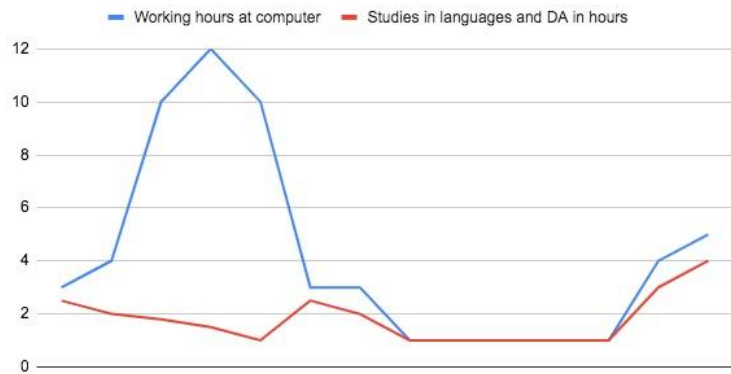
## Sleeping time in hours, Working hours at computer and Doing sports/fitness/gym in hours



## Sleeping time in hours, Working hours at computer and Doing sports/fitness/gym in hours



## Working hours at computer and Studies in languages and DA in hours





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```
1 SELECT * FROM `carstenhennig-worklife-balance.Carsten_WorkLife_2_weeks.Carsten_2weeks`
2 WHERE Working_hours_at_computer > 8
3 AND Studies_in_languages_and_DA_in_hours > 1
```

### Query results

JOB INFORMATION		RESULTS	JSON	EXECUTION DETAILS		EXECUTION GRAPH		PREVIEW							
Row	Day	Sleeping_time_hr	Working_hours	Doing_sports_fit	Studies_in_languages_and_DA_in_hours	Reading_books	Watching_videos	Go_outside_for_a_walk_or_shopping_in_hours	Walked_more_than_10_000_steps_boolean	Driving_per_car	Driving_per_bike	Number_of_cups	Drinking_non_milk	Having	Having
1	Feb 23, 2023	8.0	12	0.2	1.5	0.0	0.0	0.5	false	0	0.5	5.0	1.0	true	false
2	Feb 22, 2023	8.0	10	0.0	1.8	0.3	0.5	0.5	false	0	0.0	5.0	1.0	true	false

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```
1 SELECT * FROM `carstenhennig-worklife-balance.Carsten_WorkLife_2_weeks.Carsten_2weeks`
2 WHERE Doing_sports_fitness_gym_in_hours > 0
3 AND Go_outside_for_a_walk_or_shopping_in_hours > 0
4 AND Walked_more_than_10_000_steps_boolean = true
```

### Query results

JOB INFORMATION		RESULTS	JSON	EXECUTION DETAILS		EXECUTION GRAPH		PREVIEW							
Row	Day	Sleeping_time_hr	Working_hours	Doing_sports_fit	Studies_in_languages_and_DA_in_hours	Reading_books	Watching_videos	Go_outside_for_a_walk_or_shopping_in_hours	Walked	Driving_per_car	Driving_per_bike	Number_of_cups	Drinking_non_milk	Having	Having
1	Feb 27, 2023	8.0	1	0.2	1.0	0.0	0.2	3.0	true	0	0.0	2.0	0.5	true	false
2	Feb 28, 2023	8.0	1	0.2	1.0	0.0	0.2	4.0	true	0	0.0	1.5	0.75	true	false
3	Feb 26, 2023	8.0	3	0.75	2.0	0.5	0.5	1.5	true	0	0.0	4.0	1.2	false	true
4	Feb 25, 2023	8.5	3	0.75	2.5	0.5	0.75	1.0	true	0	0.5	4.0	1.0	false	true
5	March 4, 2023	9.0	4	0.75	3.0	0.5	0.75	1.5	true	0	0.5	5.0	1.0	false	true
6	March 5, 2023	8.0	5	0.75	4.0	1.0	1.0	2.0	true	0	0.75	4.0	1.2	false	true



## 4. Share

Structured approach:

- **Learn discipline**  
1+ hours/day studying while workdays
- **Good sleep**  
8 hours/night in minimum
- **Active days**  
More than 10,000 steps at 64% of the monitored 14 days



# Work hard & study

Day	Sleeping time in hours	Working hours at computer	Doing sports/fitness/other hours	Studies in languages and DA in hours	Reading books in hours	Watching videos/movies in hours	Go outside for
Feb 20, 2023	8	3	0	2.5	0.35	1.5	

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```
1 SELECT * FROM 'carstenhennig-worklife-balance.Carsten_WorkLife_2_weeks.Carsten_2weeks'  
2 WHERE Working_hours_at_computer > 8  
3 AND Studies_in_languages_and_DA_in_hours > 1
```

## Query results

JOB INFORMATION

RESULTS

JSON

EXECUTION DETAILS

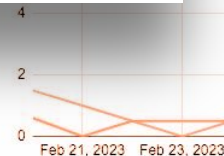
EXECUTION GRAPH

PREVIEW

Row	Day	Sleeping_time_in...	Working_hours...	Doing_sports_fit...	Studies_in_lang...	Reading_books...	Watching_videos...	Go_outside_for...	Walked...	Driving_per_car...	Driving_per_bike...	Number_of_cup...	Drinking_non_mi...	Having...	Having...
1	Feb 23, 2023	8.0	12	0.2	1.5	0.0	0.0	0.5	fal...	0	0.5	5.0	1.0	true	fal...
2	Feb 22, 2023	8.0	10	0.0	1.8	0.3	0.5	0.5	fal...	0	0.0	5.0	1.0	true	fal...

Almost 2 days full of work and study.

Long work day > 8 hours and > 1 hour of learning / studying.



# Good activity rate

Day Sleeping time in hours Working hours at computer Doing sports/fitness/gym in hours Studies in languages and DA in hours Reading books in hours Watching videos/movies in hours Go outside for a

**RUN** **SAVE** **SHARE** **SCHEDULE** **MORE**

```
1 SELECT * FROM `carstenhennig-worklife-balance.Carsten_WorkLife_2weeks.Carsten_2weeks`
2 WHERE Doing_sports_fitness_gym_in_hours > 0
3 AND Go_outside_for_a_walk_or_shopping_in_hours > 0
4 AND Walked_more_than_10_000_steps__boolean_ = true
```

## Query results

JOB INFORMATION

RESULTS

JSON

EXECUTION DETAILS

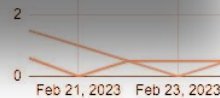
EXECUTION GRAPH

PREVIEW

Row	Day	Sleeping_time_in_hours	Working_hours_at_computer	Doing_sports_fitness_gym_in_hours	Studies_in_languages_and_DA_in_hours	Reading_books_in_hours	Watching_videos_movies_in_hours	Go_outside_for_a_walk_or_shopping_in_hours	Walked_more_than_10_000_steps__boolean_	Driving_per_car_in_hours	Driving_per_bike_in_hours	Number_of_cups_of_coffee_in_hours	Drinking_non_alcoholic_beverages_in_hours	Having_a_meal_in_hours	Having_a_meal_in_hours
1	Feb 27, 2023	8.0	1	0.2	1.0	0.0	0.2	3.0	true	0	0.0	2.0	0.5	true	false
2	Feb 28, 2023	8.0	1	0.2	1.0	0.0	0.2	4.0	true	0	0.0	1.5	0.75	true	false
3	Feb 26, 2023	8.0	3	0.75	2.0	0.5	0.5	1.5	true	0	0.0	4.0	1.2	false	true
4	Feb 25, 2023	8.5	3	0.75	2.5	0.5	0.75	1.0	true	0	0.5	4.0	1.0	false	true
5	March 4, 2023	9.0	4	0.75	3.0	0.5	0.75	1.5	true	0	0.5	5.0	1.0	false	true
6	March 5, 2023	8.0	5	0.75	4.0	1.0	1.0	2.0	true	0	0.75	4.0	1.2	false	true

42% of monitored days with sports, walks and > 10,000 steps.

Consistent sleep time of 8 hours in minimum every day.



# Healthy living

Day	Sleeping time in hours	Working hours at computer	Doing sports/fitness/gym in hours	Studies in languages and DA in hours	Reading books in hours	Watching videos/movies in hours	Go outside for a
	<a href="#">RUN</a>	<a href="#">SAVE</a>	<a href="#">SHARE</a>	<a href="#">SCHEDULE</a>	<a href="#">MORE</a>		
1	SELECT * FROM `carstenhennig-worklife-balance.Carsten_WorkLife_2_weeks.Carsten_2weeks`						
2	WHERE Having_breakfast_and_warm_lunch_and_dinner__boolean_ = true						
3	AND Number_of_cups_of_coffee < 3						
4	OR Drinking_non_mineral_water_in_liters > 1						

## Query results

JOB INFORMATION

RESULTS

JSON

EXECUTION DETAILS

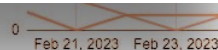
EXECUTION GRAPH

PREVIEW

Row	Day	Sleeping_time_in_hours	Working_hours_at_computer	Doing_sports_fitness_gym_in_hours	Studies_in_languages_and_DA_in_hours	Reading_books_in_hours	Watching_videos_movies_in_hours	Go_outside_for_a	Walked	Driving_per_car	Driving_per_bike	Number_of_cups_of_coffee	Drinking_non_mineral_water_in_liters	Having_breakfast_and_warm_lunch_and_dinner__boolean_	Having_drinking_non_mineral_water_in_liters
1	Feb 21, 2023	7.0	4	0.0	2.0	0.0	1.0	0.0	false	0	0.3	5.0	1.5	true	false
2	Feb 27, 2023	8.0	1	0.2	1.0	0.0	0.2	3.0	true	0	0.0	2.0	0.5	true	false
3	Feb 28, 2023	8.0	1	0.2	1.0	0.0	0.2	4.0	true	0	0.0	1.5	0.75	true	false
4	March 1, 2023	8.0	1	0.0	1.0	0.0	0.3	4.0	true	0	0.0	1.0	1.0	true	false
5	March 2, 2023	8.0	1	0.0	1.0	0.0	0.2	8.0	true	0	0.0	1.0	1.0	true	false
6	Feb 26, 2023	8.0	3	0.75	2.0	0.5	0.5	1.5	true	0	0.0	4.0	1.2	false	true
7	March 5, 2023	8.0	5	0.75	4.0	1.0	1.0	2.0	true	0	0.75	4.0	1.2	false	true
8	Feb 24, 2023	8.0	10	0.3	1.0	0.3	0.5	0.5	false	0	0.5	4.0	1.2	true	false

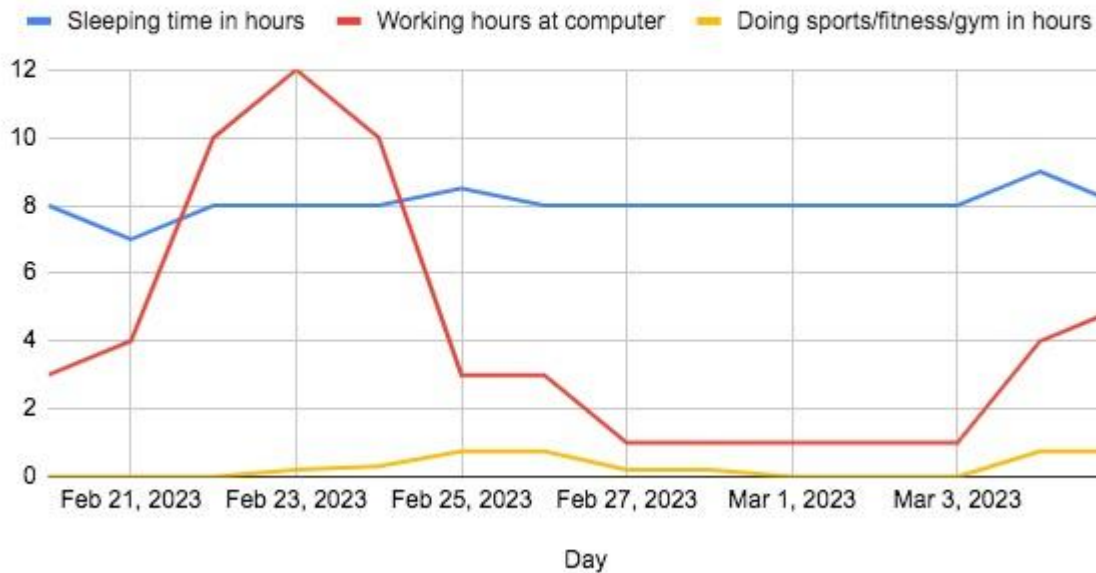
57% of monitored days with regular meals and less of coffee and enough water.

But 35% of monitored days with 5+ cups of coffee.



# Some peaks of sports / fitness

Sleeping time in hours, Working hours at computer and Doing sports/fitness/gym in hours



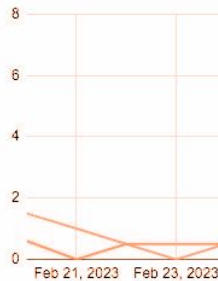
Reading books in hours	Watching videos/movies in hours	Go outside for a
0.35	1.5	
0	1	
0.3	0.5	
0	0	
0.3	0.5	
0.5	0.75	
0.5	0.5	
	0.2	
	0.2	
	0.3	
	0.2	
	0.2	

nd Studies in languages and DA

Studies in languages and DA in hours

Watching videos/mov shopping in hours

Watching videos/mov

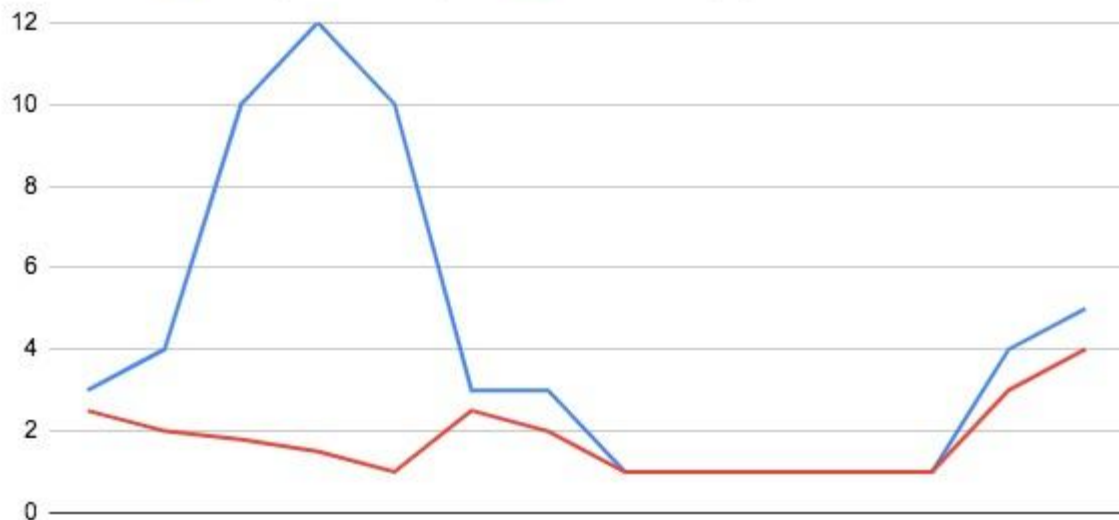


On days with less work sport activity could be increased.

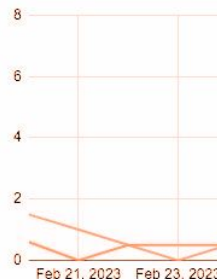
Good sleep on days full of work.



## ly



Reading books in hours	Watching videos/movies in hours	Go outside for a walk in hours
0.35	1.5	
0	1	
0.3	0.5	
0	0	
0.3	0.5	
0.5	0.75	
0.5	0.5	

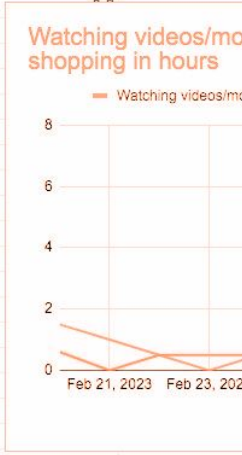
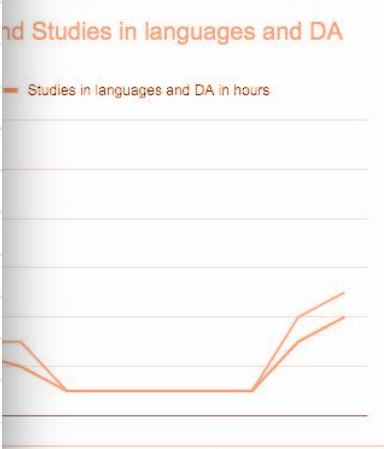


**Consistant learning / studying even on days full of work.**

# Couch potato vs. outdoor activity



Reading books in hours	Watching videos/movies in hours	Go outside for a
0.35	1.5	
0	1	
0.3	0.5	
0	0	
0.3	0.5	
0.5	0.75	
0.5	0.5	



Nearly daily outdoor activities.

Low media consumption.





## 4. Act

Implement changes and take actions:

→ **Reward yourself for healthy drinking**

Reduce daily consumption of coffee: Drink 1 big tea pot / day

Increase drinking of non-mineral water per day to 1 litre in minimum

→ **Track daily outdoor activities**

Set goals of 1 hour of outdoor activity per day and

increase to 75% of week with > 10,000 steps/day

→ **Limit daily screen time for eye health**

Track daily of computer & tablet & smartphone screen - set limit to 8-9 hours/day

Switch learning / studying from screens to books

To be continued

**MORE DATA TO ANALYZE  
KEEP MONITORING  
THANK YOU  
FOR YOUR  
ATTENTION**

More: [about.me/carsten.hennig](https://about.me/carsten.hennig)



**DA**

Still much  
to learn in  
Data  
Analytics