Daily logs (Summer 2023)

8 h/day

Every hour:

45 minutes: Work

15 min: Break (Meditation, Drinking water, Walking, Nap, Workout)

**Outlines**

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[06-28-2023 Wednesday 4](#_Toc139312277)

[06-27-2023 Tuesday 5](#_Toc139312278)

[06-26-2023 Monday 5](#_Toc139312279)

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[06-23-2023 Friday 5](#_Toc139312281)

[06-22-2023 Thursday 5](#_Toc139312282)

[06-21-2023 Wednesday 6](#_Toc139312283)

[06-20-2023 Tuesday 6](#_Toc139312284)

[06-19-2023 Monday 6](#_Toc139312285)

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[06-16-2023 Friday 6](#_Toc139312287)

[06-15-2023 Thursday 6](#_Toc139312288)

[06-14-2023 Wednesday 6](#_Toc139312289)

[06-13-2023 Tuesday 6](#_Toc139312290)

[06-12-2023 Monday 7](#_Toc139312291)

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[06-09-2023 Friday 7](#_Toc139312293)

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[06-02-2023 Friday 7](#_Toc139312299)

[06-01-2023 Thursday 7](#_Toc139312300)

[05-31-2023 Wednesday 8](#_Toc139312301)

[05-30-2023 Tuesday 8](#_Toc139312302)

[05-29-2023 Monday 8](#_Toc139312303)

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[05-26-2023 Friday 8](#_Toc139312305)

[05-25-2023 Thursday 8](#_Toc139312306)

[05-24-2023 Wednesday 8](#_Toc139312307)

[05-23-2023 Tuesday 8](#_Toc139312308)

[05-22-2023 Monday 8](#_Toc139312309)

# Daily logs

## Week 7 \_ July 03 - 07

### 07-07-2023 Friday

* 09-10:
* 10-11:
* 11-12:
* 12-01:
* 01-02:
* 02-03:
* 03-04:
* 04-05:

### 07-06-2023 Thursday

* 09-10:
* 10-11:
* 11-12:
* 12-01:
* 01-02:
* 02-03:
* 03-04:
* 04-05:

### 07-05-2023 Wednesday

* 09-10:
* 10-11:
* 11-12:
* 12-01:
* 01-02:
* 02-03:
* 03-04:
* 04-05:

### 07-04-2023 Tuesday

* 09-10: Code: Merge dataset
* 10-11: Code: Merge dataset
* 11-12: Code: Data exploration (dfe)
* 12-01: Code: Data exploration (dfn)
* 01-02: Code: Data exploration (Plots)
* 02-03: Concept of features
* 03-04: Concept of features
* 04-05: Learning concept of dealing with missing values

### 07-03-2023 Monday

* 09-10: Learning concept of the project (example)
* 10-11: Learning concept of the project (example)
* 11-12: Discussion with Talha (dataset)
* 12-01: Discussion with Talha (dataset)
* 01-02: Code: Merge dataset
* 02-03: Code: Data exploration (dfe)
* 03-04: Code: Data exploration (dfn)
* 04-05: Code: Data exploration (Plots)

## Week 6 \_ June 26 - 30

### 06-30-2023 Friday

* 09-10: Paper/ Concepts
* 10-11: Paper/ Concepts
* 11-12: Paper/ Concepts
* 12-01: Paper/ Concepts
* 01-02: Paper/ Concepts
* 02-03: Paper/ Concepts
* 03-04: Paper/ Concepts
* 04-05: GitHub

### 06-29-2023 Thursday

* 09-10: Paper
* 10-11: Paper
* 11-12: Paper
* 12-01: Code/Data
* 01-02: Code/Data
* 02-03: Code/Data
* 03-04: Hyper-parameter tuning process
* 04-05: GitHub

### 06-28-2023 Wednesday

* 09-10: Paper
* 10-11: Paper
* 11-12: Paper
* 12-01: Paper
* 01-02: Paper
* 02-03: Report
* 03-04: GitHub
* 04-05: Report

### 06-27-2023 Tuesday

* 09-10: Headache
* 10-11: Headache
* 11-12: Headache
* 12-01: Headache
* 01-02: Time Series Analysis: MA (q)
* 02-03: Time Series Analysis: AR (p)
* 03-04: Time Series Analysis: ARMA (p,q)
* 04-05: Time Series Analysis: ARIMA (p,d,q)

### 06-26-2023 Monday

* 09-10: writing code to comparison
* 10-11: writing code to comparison
* 11-12: writing code to comparison
* 12-01: writing code to comparison
* 01-02: writing code to comparison
* 02-03: paper
* 03-04: paper
* 04-05: paper

## Week 5 \_ June 19 - 23

### 06-23-2023 Friday

* Feature selection (SuperMAG)
  + There is no description of data on the website.
  + There are two ways to download the data. I checked all of them and the data are different.
  + Find a description through website - not good
  + Search to find a description
  + Both descriptions are in Code
  + Write a code to compare data

### 06-22-2023 Thursday

* Data Exploration
* Feature selection

### 06-21-2023 Wednesday

* Data Exploration
* GitHub

### 06-20-2023 Tuesday

* Data Exploration
* ??? Feature selection
  + ??? <https://omniweb.gsfc.nasa.gov/html/omni_min_data.html>
  + ??? <https://omniweb.gsfc.nasa.gov/html/hro_interface.html>

### 06-19-2023 Monday

* Holiday

## 

## Week 4 \_ June 12 - 16

### 06-16-2023 Friday

* Meeting with Talha to discuss how to download the dataset
* Year-by-year downloads of data
* Preparing the way data is downloaded in Google Colab

### 06-15-2023 Thursday

* Files management
* Google Docs: Resources
* Google Docs: Concepts
* Website data

### 06-14-2023 Wednesday

* Data acquisition
* Cleaning data

### 06-13-2023 Tuesday

* Data acquisition

### 06-12-2023 Monday

* Data acquisition

## Week 3 \_ June 5 - 9

### 06-09-2023 Friday

* Reading the paper to replicate it

### 06-08-2023 Thursday

* Githup

### 06-07-2023 Wednesday

* Meeting
* Reading papers

### 06-06-2023 Tuesday

* Reading a couple of PIML’s pages
* Preparing report

### 06-05-2023 Monday

* Group discussion (Talha, Sabby, Alireza)  
  Talha provided us with lots of information about GIC, ML, Magnemoter System, and Microcontroller, ...
* Reading a couple of PIML’s pages

## Week 2 \_ May 29 - June 2

### 06-02-2023 Friday

* Reading 2 papers
* Analyzing and extracting concepts

### 06-01-2023 Thursday

* Reading a paper titled Physics-Informed Machine Learning (PILM) - Long survay

### 05-31-2023 Wednesday

* Discussion with Talha
* Reading a paper titled Physics-Informed Machine Learning (PILM) - Long survay

### 05-30-2023 Tuesday

* Reading and thinking about SuperMAG's thermal effect

### 05-29-2023 Monday

* Holiday
* Reading Chapter 1 of ML for Space weather

## 

## Week 1 \_ May 22 - 26

### 05-26-2023 Friday

* Reading the paper bySiddique et al. 2022. It is long survey

### 05-25-2023 Thursday

* Meeting
* Search to learn the fundamental concepts of our project

### 05-24-2023 Wednesday

* Discussion with Talha
* Literature Review

### 05-23-2023 Tuesday

* Literature Review
* Solar wind and SuperMAG data site review

### 05-22-2023 Monday

* Literature Review
* System set-up
* Data acquisition with the help of Talha

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