# Data collection application

Python PC-datacollection (CPU and GPU temps, use time, cpu and gpu utilization, Watt cons.) and storing (MySQL database, CSV, SQLite) and plotting visible via browser or app (Streamlit? Simple Tkinter GUI?)

## Features

Plot What you want (CPU temp, util) between for example 10/3/2024 - 15/5/2024 and show it on browser or app. (Min plot one day 24h)

Collect and store large amounts of data from pc statistics.

Calculate time delta from pc start to shutdown and plot it.

Easy access to large amounts of visualized (plotted) data.

Dynamic resolution scaling depending on time span to be plotted. For example for a days data, data resolution can be 1 or 5s, but for week data increment can be 30s or 1min

## Datastructure

2 tables (CPU & GPU)

Example table:

Date Time CPU\_temp CPU\_util

15/3/2024 17:00:00 60C 74%

15/3/2024 17:00:05 61C 74%

15/3/2024 17:00:10 66C 74%

15/3/2024 17:00:15 64C 74%

15/3/2024 17:00:20 61C 74%

## GUI

## Links

https://stackoverflow.com/questions/62617789/get-cpu-and-gpu-temp-using-python-windows

https://discuss.python.org/t/temperature-once-per-second/13857

https://stackoverflow.com/questions/75280400/openhardwaremonitor-not-showing-all-sensors

https://openhardwaremonitor.org/wordpress/wp-content/uploads/2011/04/OpenHardwareMonitor-WMI.pdf

<https://stackoverflow.com/questions/6579127/delay-a-task-until-certain-time>

<https://stackoverflow.com/questions/2031111/in-python-how-can-i-put-a-thread-to-sleep-until-a-specific-time>

<https://pieriantraining.com/python-smoothing-data-a-comprehensive-guide/>

https://www.geeksforgeeks.org/how-to-calculate-moving-average-in-a-pandas-dataframe/