

# Technical Software Documentation

This software is a Backend solution can measure the power consumption of an application on the computer.

## Architecture and Stack

- All software implementations is in Python
- The libraries used were: **timeit**, **psutil**, **nvidia\_smi**, **subprocess** and **os**.

## How it works ?

Software will get the computer information like CPU use, Memory use and GPU use. After that, it will do a simple formula to get the computer consumption:

```
pc_consumption = ((mem_usage) + (platform)* (utilization)) / 1000
```

So with the computer consumption, the system will get the app execution:

```
execution_time = timeit.timeit(stmt=maincode, number=1)  
power_consumption = pc_consumption
```

Then we will have the power consumption using the follow formula:

```
electricity_consumption = (execution_time * power_consumption) / 1000
```

After all, we will have the power usage of an application.