

2PEM-100A

PRACTICE 2_1

Uploading and analyzing energy consumption data

More information:

- <https://2pem100a.blogspot.com/>

More examples:

- https://github.com/vasanza/Matlab_Code/tree/Electrical-Systems-Simulation
- https://github.com/avbazurt/Simulacion_Sistemas_Electricos

Dataset:

- <http://ieee-dataport.org/8630>

Technical information

- Sampling frequency: 4Hz (250mSeg)

Example 1: Loading a .mat file

```
clear;clc;
path=fullfile(' ./dataset.mat');
data=load(path);
data=struct2cell(data);
data=data{1,1};
data=table2array(data(:,4:12));
data1=data(1:1000,:);
```

Example 2: Statistical information of the data

```
max(data)
```

```
ans = 1x9
    120.2000    1.9800   226.6000    60.1000   100.1200     1.0000    38.3300   99.8000 ...
```

```
min(data)
```

```
ans = 1x9
    119.4000     0.7000    79.1000    59.7000    48.5600     0.7300    28.3300     0 ...
```

```
datastats(data(:,1))
```

```
ans = struct with fields:
    num: 1625175
    max: 120.2000
    min: 119.4000
    mean: 120.0236
    median: 120
```

range: 0.8000
std: 0.0648

Example 3: Graphing data

```
plot(data)
```

