

Meeting #3

09/23/21

Omar Luna

Deliverables

- Read data using `read_eeg.py` function
- Visualize data using `matplotlib`
- Calculate statistics
- Familiarize with Json files

Methodology and Learnings

- Data

- Imported the function from the file
 - Stored value as dataframe
- Visualized by segmenting data into columns
 - Set up graphs
 - Plotted values
 - show() function
- Used pandas functions to manipulate data and output statistics

- Json

- syntax
- pandas.read_json

Learning

- dataset vs dataframe
- Matplotlib functions
- Json files

Results

```
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read_eeg.py display_data.py

25
26 # Get data from read_eeg function
27 testData = reader.read_eeg('/home/omar/CSproject/interactiveA
28 # Data seperated into columns
29 temp = testData.loc[:, "Temp."]
30 print(temp)
31 trigger = testData.loc[:, "TRIGGER"]
32 #print(trigger)
33 packet_Counter = testData.loc[:, "Packet Counter"]
34 #print(packet_Counter)
35 fp1 = testData.loc[:, "Fp1"]
36 print(fp1)
37 fp2 = testData.loc[:, "Fp2"]
38 print(fp2)
39
40 # Analysis
41 print("\nMean Temperature: ", temp.mean())
42 sample_1 = temp.sample(n=2)
43 print("\nRandom sample\n", sample_1)
44 print("# of unique numbers in Fp1: ", testData.Fp1.nunique())
45
46 # Figure 1
47 fig1 = plt.figure(1)
48 # temp vs fp2
49 X = temp
50 Y = fp1
51 Z = fp2
52 plt.subplot(211)
53 plt.scatter(X, Z)
54 plt.xlabel("temp")
55 plt.ylabel("fp2")
56 # temp vs fp1
57 plt.subplot(211)
58 plt.scatter(X, Y, color='red')

display_data.py 64:14
```

```
59 plt.xlabel("temp")
60 plt.ylabel("fp1")
61
62 # Figure 2
63 fig2 = plt.figure(2)
64 # temp vs fp1
65 plt.subplot(111)
66 plt.plot(X, Y, color='green')
67 plt.xlabel("temp")
68 plt.ylabel("fp1")
69
70 plt.show()
71
```

```

functions : pyth
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3      31.8125
4      31.8125
...
146879 32.0000
146880 32.0000
146881 32.0000
146882 32.0000
146883 32.0000
Name: Temp., Length: 146884, dtype: float64
0      -0.008475
1      -0.008480
2      -0.008486
3      -0.008489
4      -0.008489
...
146879 -0.005828
146880 -0.005819
146881 -0.005815
146882 -0.005816
146883 -0.005821
Name: Fp1, Length: 146884, dtype: float64
0      -0.004371
1      -0.004376
2      -0.004385
3      -0.004392
4      -0.004394
...
146879 -0.002591
146880 -0.002581
146881 -0.002572
146882 -0.002568
146883 -0.002573
Name: Fp2, Length: 146884, dtype: float64

Mean Temperature: 31.8594954181531

Random sample
50461 31.8125
2321 31.8750
Name: Temp., dtype: float64
# of unique numbers in Fp1: 146878

```

