Report for Week 3 – 20th April to 26th April

Tasks Performed :

- Obtained the results for volume of users translating from neutral state to a Brexit support state or Against Brexit state, in consecutive time-frames with Ground truth with FS(4) and as well as predicted(FS4).
- As from the previous work report we can see the below Figure 1 indicating the volume of users translating from neutral state to a Brexit support state or Against Brexit state, in consecutive time-frames with Predicted data

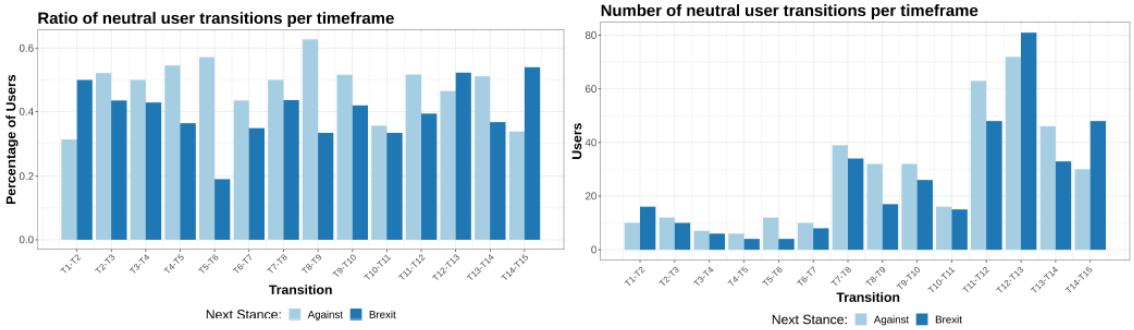


Figure 1 from the previous work with the predicted data

- In Figure 2 , I have indicated the volume of users translating from neutral state to a Brexit support state or Against Brexit state, in consecutive time-frames with Ground truth (FS4) Data

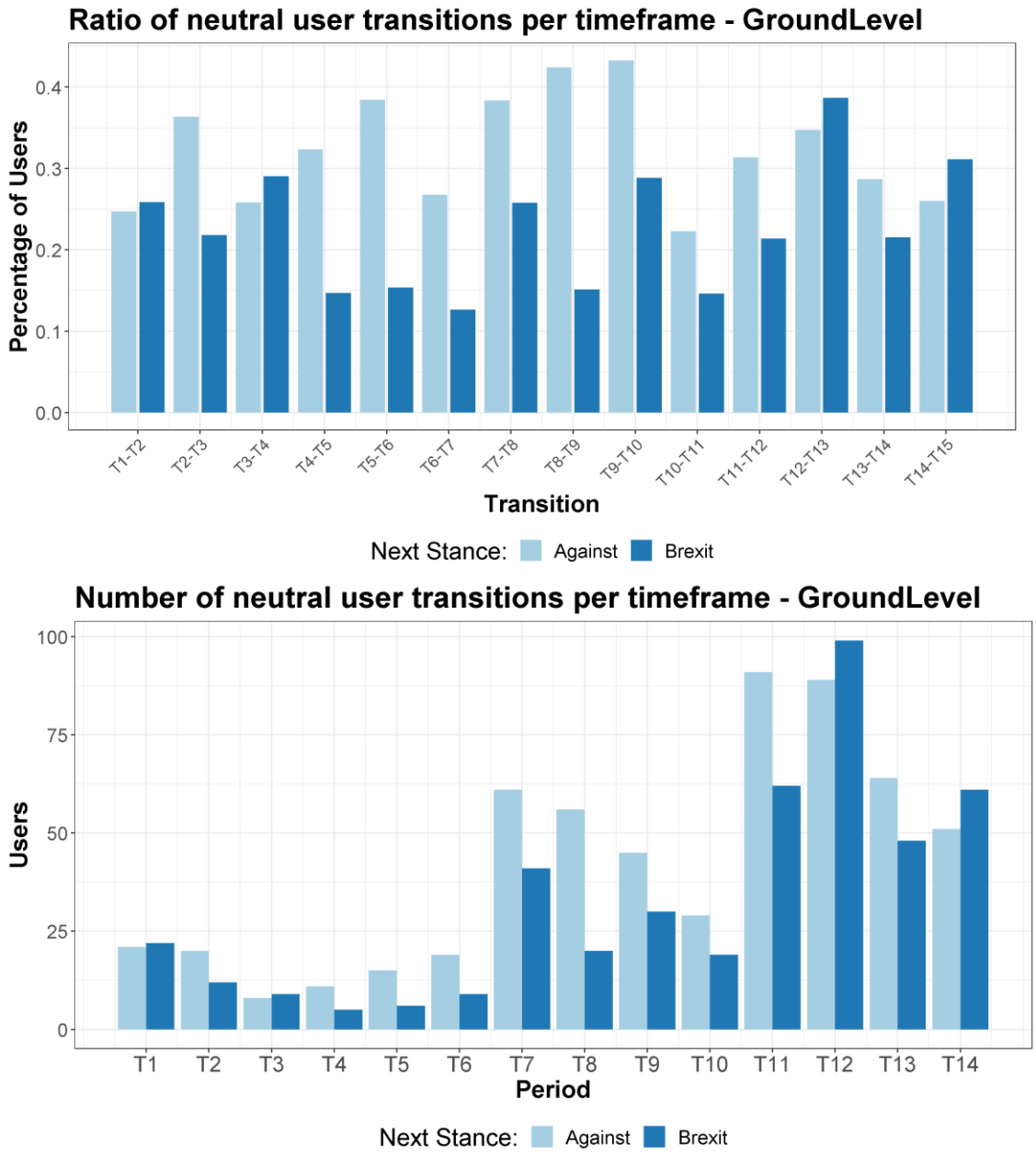


Figure 2 from the previous work with the ground truth(FS4) data

- In Figure 3 , I have indicated the volume of users translating from neutral state to a Brexit support state or Against Brexit state, in consecutive time-frames with Predicted Data (FS4)

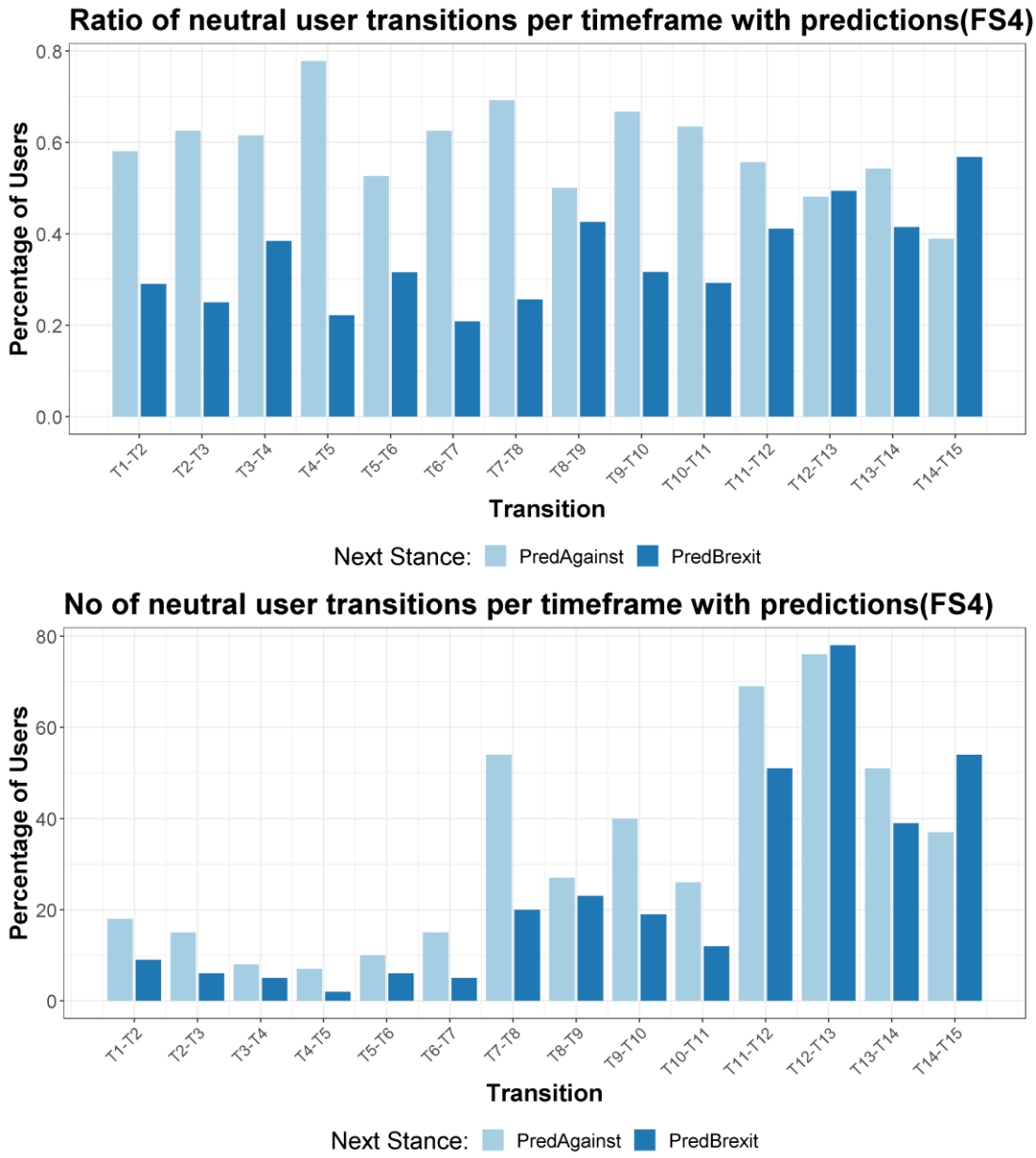


Figure 3 from the previous work with the predicted (FS4) data

- We can see that this plot is not matching with the previous work because the we do not have the exact values which andrie used for plotting this, I have tried my best to do some experiments on the values which is used for calculating the prediction ratio in the code which is main reason the plot is not matching exactly same as the previous.
- After some experiments , we got better results in Figure 4 but it is not matching to the previous work

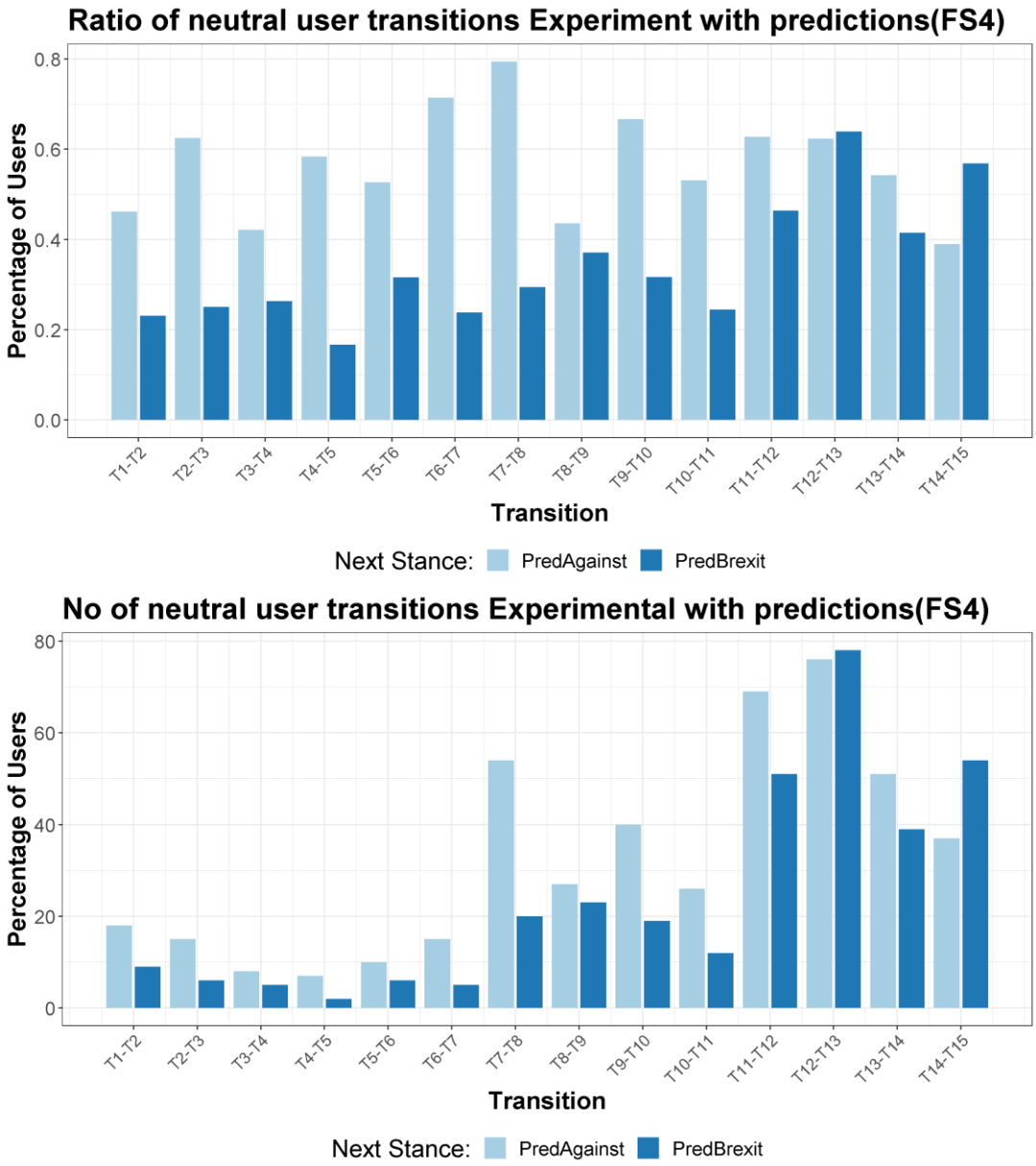


Figure 4 from the previous work with the predicted (FS4) experimental data

- We can see the number of users migration from the each stance in Table 1, I have applied the XGBoost our best predictor using the FS4 data.

Time Frame	Against	Brexit	Neutral
T1	13	17	1
T2	13	10	1
T3	X	X	X
T4	X	X	X
T5	13	5	1
T6	11	8	5
T7	43	33	0
T8	34	18	0
T9	33	25	2
T10	17	15	10
T11	64	48	11
T12	71	83	4
T13	48	33	13
T14	30	54	12

Table 1

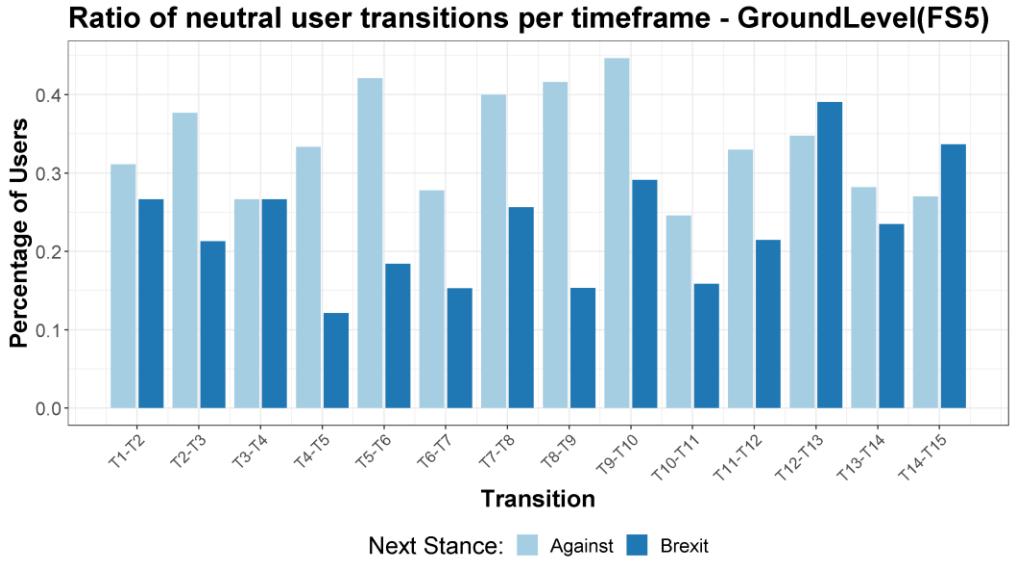
- In Table 1, we could not predict stances for the time frame T3 and T4 , because we do not much data to according to our classifier. If we see T12 time frame , this exactly matches with the previous year work. Neutral Users had increase in the from time -frame 12 to Brexit in the time-frame 13.

- As we already have Textual data from FS0. I have the added textual data with the FS1, FS2 and FS3 and got the results for the number of users migration from the each stance. As we can see that peak in the number of users in T12 and T13 , I have applied our predictors model with this T12 dataset and found the best predictor as XGBoost.

- After applying our best predictor as XGBoost, I have build Table 2 which we can see the number of users migration from the each stance.

Time Frame	Against	Brexit	Neutral
T1	15	18	0
T2	13	11	0
T3	X	X	X
T4	X	X	X
T5	11	6	0
T6	13	7	0
T7	40	36	0
T8	34	17	0
T9	34	25	0
T10	16	17	0
T11	75	43	1
T12	72	82	0
T13	50	36	2
T14	29	54	1

- In Figure 5 , I have indicated the volume of users translating from neutral state to a Brexit support state or Against Brexit state, in consecutive time-frames with Ground truth (FS5)



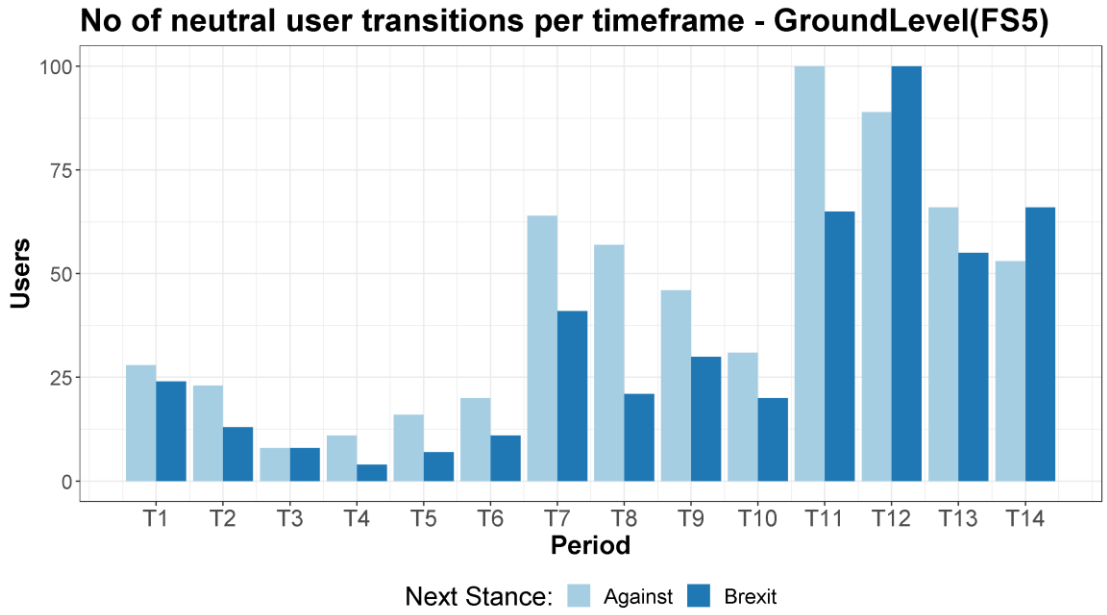


Figure 5 with the Ground Truth (FS5)

- From Figure 5 we can see that there is no much change in the number of user transitions per timeframe.

Follow Up Work:

- Understanding of the generation new proposed feature sets.