

COM6012 Assignment 1 Report : 180128022

Ans. 1.A:

The average number of requests on Sunday is 45647.5
The average number of requests on Monday is 75421.0
The average number of requests on Tuesday is 69460.0
The average number of requests on Wednesday is 79674.5
The average number of requests on Thursday is 90859.0
The average number of requests on Friday is 65771.5
The average number of requests on Saturday is 46095.0

Ans. 1.B:

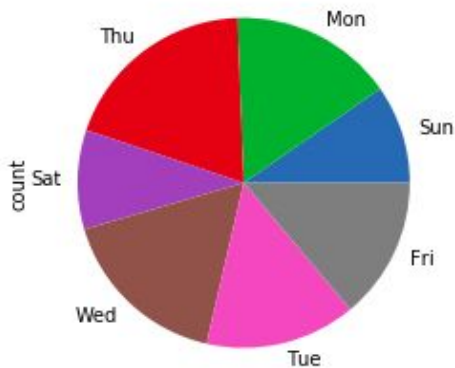


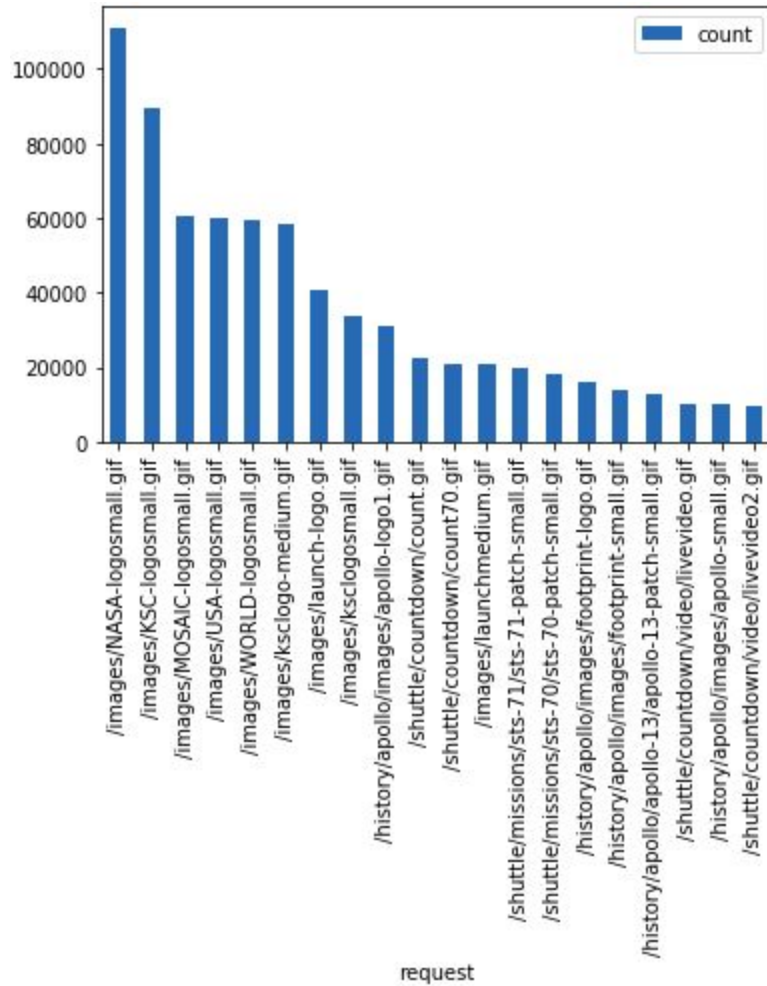
Fig 1: Requests on Each Day

It can be seen that the highest number of requests were made on Thursdays, while the lowest, on Sundays. Thus, a sizable portion of the pie is consumed by weekdays. From this trend, it can be assumed that people tend to be on the internet during non-holidays which is interesting.

Ans. 1.C:

request	count
/images/NASA-logosmall.gif	111144
/images/KSC-logosmall.gif	89530
/images/MOSAIC-logosmall.gif	60300
/images/USA-logosmall.gif	59845
/images/WORLD-logosmall.gif	59325
/images/ksclogo-medium.gif	58616
/images/launch-logo.gif	40841
/images/ksclogosmall.gif	33555
/history/apollo/images/apollo-logo1.gif	31052
/shuttle/countdown/count.gif	22189
/shuttle/countdown/count70.gif	20921
/images/launchmedium.gif	20788
/shuttle/missions/sts-71/sts-71-patch-small.gif	19832
/shuttle/missions/sts-70/sts-70-patch-small.gif	18135
/history/apollo/images/footprint-logo.gif	16168
/history/apollo/images/footprint-small.gif	13912
/history/apollo/apollo-13/apollo-13-patch-small.gif	13004
/shuttle/countdown/video/livevideo.gif	10143
/history/apollo/images/apollo-small.gif	10089
/shuttle/countdown/video/livevideo2.gif	9816

Ans. 1.D:



It is observed that the NASA Logo was the most requested image, which is interesting. However, this trend continued as the most of the top 20 .gif images were related to space expedition.

Ans. 2.A:

Split	RMSE_Drop	RMSE_Choice	MAE_Drop	MAE_Choice
1	0.864384	0.863228	0.668930	0.666349
2	0.865567	0.864425	0.669821	0.667332
3	0.865939	0.864767	0.670150	0.667606
4	0.866270	0.865128	0.670478	0.667987
5	0.866252	0.865123	0.670372	0.667891

RMSE/MAE	Mean_Drop	Mean_Choice	Std_Drop	Std_Choice
RMSE	0.865683	0.864534	0.000698	0.000703
MAE	0.669951	0.667433	0.000557	0.000588

Ans. 2.B:

The above values are received after changing maxIter to 5 from a default value of 10 in the second setting (Choice). It can be seen that upon decreasing the parameter of maximum number of iterations to run in ALS, the standard deviations for both RMSE and MAE get increased. However, the mean for RMSE and that for MAE get lowered.

Ans. 2.C:

Cluster 1:

tagId	tag
188	catastrophe
302	dialogue
468	great ending
646	mentor
742	original
302	dialogue
452	good soundtrack
468	great ending
646	mentor
742	original
302	dialogue
452	good soundtrack
468	great ending
646	mentor
742	original
302	dialogue

452	good soundtrack
468	great ending
646	mentor
742	original
302	dialogue
452	good soundtrack
468	great ending
742	mentor
302	original

Cluster 2:

tagId	tag
188	catastrophe
302	dialogue
468	great ending
646	mentor
742	original
302	dialogue
452	good soundtrack
468	great ending
646	mentor
742	original
302	dialogue
452	good soundtrack
468	great ending
646	mentor
742	original

452	good soundtrack
468	great ending
646	mentor
742	original
972	storytelling
302	dialogue
452	good soundtrack
468	great ending
646	mentor
742	original

Cluster 3:

tagId	tag
302	dialogue
452	good soundtrack
468	great ending
646	mentor
742	original
188	catastrophe
302	dialogue
468	great ending
646	mentor
742	original
188	catastrophe
302	dialogue

468	great ending
646	mentor
742	original
302	dialogue
452	good soundtrack
468	great ending
646	mentor
742	original
270	criterion
468	great ending
646	mentor
742	original
972	storytelling

Ans. 2.D:

Tags represent particular properties, exhibited by a movie, quite strongly. In each of the clusters, it can be seen that there are many repetitive tags. Tags like 'catastrophe' can mean that the movie is most likely rated negatively. On the other hand, tags like 'good soundtrack', 'great ending' can point us to the conjecture that the movie is rated positively.