$ head -1 view.csv > view\_selected.csv

$ cat view.csv | grep -e 'GA52[2356]' >> view\_selected.csv

> views <- read.table("view\_selected.csv", header = TRUE, sep=",")

> summary(views)

> summary(views)

day hour gametime zone

Min. :14814 Min. :10.69 Min. :-0.7023 The Town Centre:150

1st Qu.:14814 1st Qu.:12.28 1st Qu.:12.6517 The Arsenal : 51

Median :14814 Median :12.94 Median :23.1679 Plumstead : 47

Mean :14814 Mean :13.35 Mean :26.8456 The Marshes : 39

3rd Qu.:14814 3rd Qu.:14.50 3rd Qu.:42.8110 The Barracks : 35

Max. :14814 Max. :16.09 Max. :67.0493 Woolwich Common: 24

(Other) : 21

lon lat age r

Min. :0.00000 Min. : 0.00 Min. : 0.000 Min. : 4.00

1st Qu.:0.06672 1st Qu.:51.49 1st Qu.: 0.000 1st Qu.: 90.25

Median :0.06800 Median :51.49 Median : 0.000 Median :202.00

Mean :0.06634 Mean :50.23 Mean : 2.714 Mean :216.10

3rd Qu.:0.06949 3rd Qu.:51.49 3rd Qu.: 0.000 3rd Qu.:291.00

Max. :0.07358 Max. :51.50 Max. :198.000 Max. :703.00

NA's : 9.00

dist event playerId gameId messageId

Min. :0 message:367 P586 : 42 GA522: 66 MSG42575: 5

1st Qu.:0 P589 : 35 GA523:128 MSG42752: 3

Median :0 P569 : 34 GA525: 89 MSG43674: 3

Mean :0 P575 : 31 GA526: 84 MSG43734: 3

3rd Qu.:0 P580 : 31 MSG43814: 3

Max. :0 P579 : 29 MSG44374: 3

(Other):165 (Other) :347

type year

timeline\_content\_global:367 Min. :1900

1st Qu.:1923

Median :1944

Mean :1952

3rd Qu.:1984

Max. :2011

title

Going to Plumstead Baths : 18

Lipman dies : 12

Woolwich Pubs have strange licensing laws : 10

Midsummer Night's Dream performed at the Nursery School : 9

Please return to the Tramshed as quickly as possible. : 8

The Woolwich Arsenal finally ceases to be a military establishment: 8

(Other) :302

description

Across Woolwich many community members use the Public Baths with a rolled up towel and a bar of soap. The attendant stands at the door while the water and says controls the water flow. Take care the water isn't too hot! All community members gain 2 health and participation points. : 18

Maxs family are devasted by the news that the elder brother Lipman dies. Many of Lipmans and Maxs children remain in Woolwich but the elder generation has now gone. Your community loses 1 health point and gains 2 participation points : 12

Many of the local pubs frequented by your community close at 1030 while the pubs on the opposite side of the river would still be open to 11, your community members run through the river foot tunnel to catch another pint or two before last orders! Your community gains 2 participation points. : 10

The munitions worker's nursery is performing Midsummer's Night Dream, many of your community go along to watch their children perform, it is a celebration of community and people are amazed at how good the performance is. All your community gains 1 health, knowledge and participation point. : 9

The Arsenal finally closes as a military establishmend after a long decline. Many engineering companies also shut down that provided jobs and services to the Arsenal. Jobs are lost and the gates are closed cutting the river off from the rest of Woolwich. Woolwich loses one of its biggest employers for local communities.: 8

Across some of your communities some of the families are taking children out of school to look after other family members and the young people are struggling with drugs and joining in youth activities. They lose 2 wealth, knowledge and participation points. : 7

(Other) :303

titleLength descriptionLength content viewMins

Min. : 6.00 Min. : 4.0 family : 46 Min. :0.01948

1st Qu.:25.00 1st Qu.:212.0 linked : 10 1st Qu.:0.08124

Median :36.00 Median :284.0 local :202 Median :0.16728

Mean :35.86 Mean :264.7 regional: 99 Mean :0.23205

3rd Qu.:45.00 3rd Qu.:322.0 site : 9 3rd Qu.:0.27908

Max. :82.00 Max. :406.0 welcome : 1 Max. :2.79408

> hist(views$viewMins,breaks=seq(0,3,by=(1.0/12)))



(see later for slowPlayers)

> hist(views$viewMins[slowPlayer],breaks=seq(0,3,1/12.0))

> summary(views$viewMins[slowPlayer]

+ )

Min. 1st Qu. Median Mean 3rd Qu. Max.

0.02165 0.16660 0.27700 0.36260 0.43770 2.79400

>



> len<-views$titleLength+views$descriptionLength

> summary(len)

Min. 1st Qu. Median Mean 3rd Qu. Max.

40.0 246.0 308.0 300.5 359.0 444.0

> hist(len,breaks=seq(0,460,by=20))

>



plot(len,views$viewMins)



> viewlenlm<-lm(views$viewMins ~ len)

Call:

lm(formula = views$viewMins ~ len)

Residuals:

Min 1Q Median 3Q Max

-0.24096 -0.14654 -0.06420 0.05734 2.58739

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 0.1479092 0.0557721 2.652 0.00835 \*\*

len 0.0002799 0.0001800 1.556 0.12069

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 0.2605 on 365 degrees of freedom

Multiple R-squared: 0.006586, Adjusted R-squared: 0.003864

F-statistic: 2.42 on 1 and 365 DF, p-value: 0.1207

> contentf <- factor(views$content)

plot(contentf,views$viewMins)



**Not much difference by content type**

> playerf <- factor(views$playerId)

plot (playerf)



hist(tapply(views$viewMins,playerf,length),breaks=seq(0,46,by=2))

>

> summary(tapply(views$viewMins,playerf,length))

Min. 1st Qu. Median Mean 3rd Qu. Max.

1.00 8.50 11.50 15.29 19.25 42.00



**There is a large variation in the number of messages viewed by different players.**

> plot(playerf,views$viewMins)



**There is substantial variation between players in the range of times that they view each message for.**

> mview <- tapply(views$viewMins,views$playerId,mean)

P568 P569 P570 P571 P572 P573 P574

0.28992083 0.19601373 0.24699359 0.19166111 0.08349722 0.10344242 0.10106667

P575 P576 P578 P579 P580 P581 P582

0.10998065 0.12717857 0.25008333 0.41790575 0.29332903 0.48142037 0.37705952

P583 P584 P585 P586 P587 P588 P589

0.58593590 0.04370833 0.16437424 0.18090992 0.36703333 0.14909583 0.29920571

P590 P591 P592

0.18944394 0.26984833 0.08319792

> summary(tapply(views$viewMins,views$playerId,mean))

Min. 1st Qu. Median Mean 3rd Qu. Max.

0.04371 0.12290 0.19380 0.23340 0.29480 0.58590

> hist(mview,breaks=seq(0,1,by=(0.05)))



> mview[mview > 0.25

+ ]

P568 P578 P579 P580 P581 P582 P583 P587

0.2899208 0.2500833 0.4179057 0.2933290 0.4814204 0.3770595 0.5859359 0.3670333

P589 P591

0.2992057 0.2698483

slowPlayer <- mapply(function(p) if(p=="P568" | p=="P578" | p=="P579" | p=="P580" | p=="P581" | p=="P582" | p=="P583" | p=="P587" | p=="P589" | p=="P591") TRUE else FALSE, views$playerId)

plot(playerf[slowPlayer],views$viewMins[slowPlayer])

> plot(contentf[slowPlayer],views$viewMins[slowPlayer])

>



**Still no real effect of content type.**

gamef <- factor(views$gameId)

> summary(gamef)

GA522 GA523 GA525 GA526

66 128 89 84

> plot(gamef,views$viewMins)

>



**No difference between games.**

plot(views$gametime,views$viewMins)



**Nothing obvious based on gametime.**

> summary(tapply(views$viewMins,playerf,sum))

Min. 1st Qu. Median Mean 3rd Qu. Max.

0.1748 1.1310 1.9460 3.5480 4.9160 12.1200

>

> plot(tapply(views$viewMins,playerf,length),tapply(views$viewMins,playerf,sum))



**Players who view more messages view messages for a longer total duration.**

> summary(lm(tapply(views$viewMins,playerf,length) ~ tapply(views$viewMins,playerf,sum))

+ )

Call:

lm(formula = tapply(views$viewMins, playerf, length) ~ tapply(views$viewMins,

playerf, sum))

Residuals:

Min 1Q Median 3Q Max

-13.146 -5.063 -0.017 2.513 16.079

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 5.8255 2.1722 2.682 0.0136 \*

tapply(views$viewMins, playerf, sum) 2.6677 0.4432 6.020 4.65e-06 \*\*\*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 7.342 on 22 degrees of freedom

Multiple R-squared: 0.6222, Adjusted R-squared: 0.6051

F-statistic: 36.24 on 1 and 22 DF, p-value: 4.653e-06

>

plot(tapply(views$viewMins,playerf,length),tapply(views$viewMins,playerf,sum)/tapply(views$viewMins,playerf,length))



**But there is no very obvious effect of number of views on duration per view.**