DATA SCIENCE PROJECT

911 EMERGENCY CALLS (PENNSYLVANIA STATE, US) DASHBOARD

By:-

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About the Dataset:

- **Context:** The police/cops are always there to help out people that require their assistance. They are the reason that people are able to live peacefully and happily without any fear. This data set contains the data of such 911 calls that were made in the past.

- **Content:** The data set contains the data about latitude and longitude of the places from where call was made. It also contains a short description of the call, the station that took the call, the reason behind the call and other relevant data.

Original Dataset:

lat	lng	desc	zip	title	timeStamp	twp	addr	e
40.2978759	-75.5812935	REINDEER CT & DE	19525	EMS: BACK PAINS/I	10-12-2015 17:40	NEW HANOVER	REINDEER CT & DE	1
40.2580614	-75.2646799	BRIAR PATH & WHI	19446	EMS: DIABETIC EM	10-12-2015 17:40	HATFIELD TOWNSH	BRIAR PATH & WHI	1
40.1211818	-75.3519752	HAWS AVE; NORRIS	19401	Fire: GAS-ODOR/LE	10-12-2015 17:40	NORRISTOWN	HAWS AVE	1
40.116153	-75.343513	AIRY ST & SWEDE S	19401	EMS: CARDIAC EME	10-12-2015 17:40	NORRISTOWN	AIRY ST & SWEDE S	1
40.251492	-75.6033497	CHERRYWOOD CT & DEAD END; LOWE		EMS: DIZZINESS	10-12-2015 17:40	LOWER POTTSGRO	CHERRYWOOD CT &	1
40.2534732	-75.283245	CANNON AVE & W 9	19446	EMS: HEAD INJURY	10-12-2015 17:40	LANSDALE	CANNON AVE & W 9	1
40.1821111	-75.1277951	LAUREL AVE & OAK	19044	EMS: NAUSEA/VOM	10-12-2015 17:40	HORSHAM	LAUREL AVE & OAK	1
40.2172859	-75.405182	COLLEGEVILLE RD	19426	EMS: RESPIRATOR	10-12-2015 17:40	SKIPPACK	COLLEGEVILLE RD	1
40.2890267	-75.3995896	MAIN ST & OLD SUI	19438	EMS: SYNCOPAL EI	10-12-2015 17:40	LOWER SALFORD	MAIN ST & OLD SUI	1
40.1023985	-75.2914577	BLUEROUTE & RAI	19462	Traffic: VEHICLE AC	10-12-2015 17:40	PLYMOUTH	BLUEROUTE & RAI	1
40.2319898	-75.2518915	RT202 PKWY & KNAPP RD; MONTGOME		Traffic: VEHICLE AC	10-12-2015 17:40	MONTGOMERY	RT202 PKWY & KNA	1
40.0841613	-75.3083857	BROOK RD & COLW	19428	Traffic: VEHICLE AC	10-12-2015 17:40	PLYMOUTH	BROOK RD & COLW	1
40.1741312	-75.0984907	BYBERRY AVE & S	19040	Traffic: VEHICLE AC	10-12-2015 17:40	UPPER MORELAND	BYBERRY AVE & S	1
40.062974	-75.135914	OLD YORK RD & VA	19027	Traffic: VEHICLE AC	10-12-2015 17:40	CHELTENHAM	OLD YORK RD & VA	1
40.0972222	-75.3761952	SCHUYLKILL EXPY & CROTON RD UNDE		Traffic: VEHICLE AC	10-12-2015 17:40	UPPER MERION	SCHUYLKILL EXPY	1
40.2237777	-75.2353993	STUMP RD & WITCH	18936	Traffic: VEHICLE AC	10-12-2015 17:40	MONTGOMERY	STUMP RD & WITCH	1
40.2432578	-75.2865516	SUSQUEHANNA AVI	19446	EMS: RESPIRATOR	10-12-2015 17:46	LANSDALE	SUSQUEHANNA AVI	1
40.3121807	-75.5742598	CHARLOTTE ST & M	19525	EMS: DIZZINESS	10-12-2015 17:47	NEW HANOVER	CHARLOTTE ST & M	1
40.114239	-75.338508	PENN ST & ARCH S	19401	EMS: VEHICLE ACC	10-12-2015 17:47	NORRISTOWN	PENN ST & ARCH S	1
40.2093369	-75.1352655	COUNTY LINE RD &	18974	Traffic: DISABLED V	10-12-2015 17:47	HORSHAM	COUNTY LINE RD &	1
40.114239	-75.338508	PENN ST & ARCH S	19401	Traffic: VEHICLE AC	10-12-2015 17:47	NORRISTOWN	PENN ST & ARCH S	1
40.1179476	-75.2098476	CHURCH RD & REDC	19031	Traffic: DISABLED V	10-12-2015 17:57	WHITEMARSH	CHURCH RD & REDC	1
40.1990064	-75.3000584	LILAC CT & PRIMRC	19446	Fire: APPLIANCE FI	10-12-2015 18:02	UPPER GWYNEDD	LILAC CT & PRIMRC	1

Link to Original Dataset: 911.csv

Queries to clean and split data:

```r
#importing packages
library(dplyr)
library(stringr)
install.packages("lubridate")
library(lubridate)

#data importing
complete.dataset<-read.csv("911.csv")
str(complete.dataset)
nrow(complete.dataset)

#data cleaning
clean.dataset<-na.omit(complete.dataset)
nrow(clean.dataset)
clean.dataset<-clean.dataset[,-9]
index<-c(1:86637)
clean.dataset<-cbind(index,clean.dataset)

address.data<-select(clean.dataset,index,lat,lng,zip,addr,twp,timeStamp)
crime.data<-select(clean.dataset,index,title)

crime.data[c('Type','subcategory')]<-str_split_fixed(crime.data$title,': ', 2)
crime.data<-crime.data[c('index','Type','subcategory')]

address.data["date"]<-as.Date(address.data$timeStamp)
address.data["Time"]<-format(as.POSIXct(address.data$timeStamp), format = "%H:%M:%S")
address.data<-address.data[-7]

time.data<-select(address.data,index,date,Time)
address.data<-address.data[c(-7,-8)]

holidays<-as.Date(c("2015-12-25","2016-01-01","2016-01-18","2016-02-15","2016-05-30","2016-07-04"))
time.data<-time.data %>% mutate(Holiday = if_else(date %in% holidays, "Yes", "No"))
time.data$weekday<- wday(time.data$date, label=TRUE, abbr=FALSE)
time.data<-time.data %>% mutate(Noon = if_else(Time<"12:00:00", "Before Noon", "After Noon"))

#data export
write.csv(address.data,"addressdata.csv",row.names = F)
write.csv(time.data,"timedata.csv",row.names = F)
write.csv(crime.data,"crimedata.csv",row.names = F)
```

R File: datacleaning.r

Final Datasets:

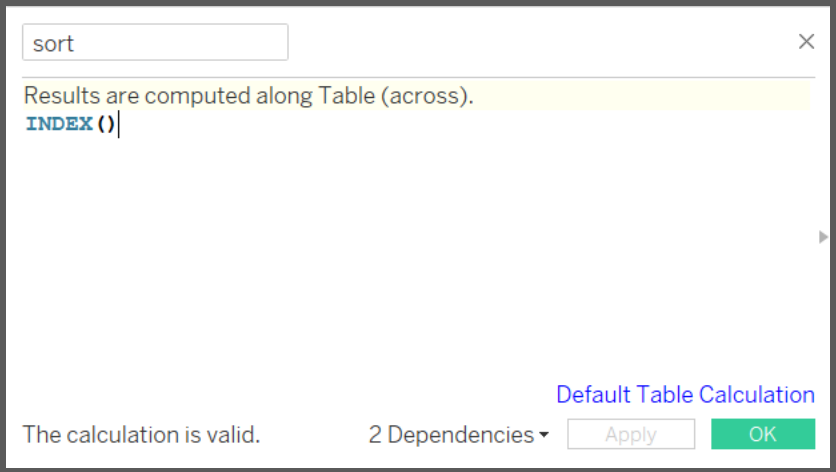
- addressdata.csv
- crimedata.csv
- timedata.csv

Joining of Datasets:

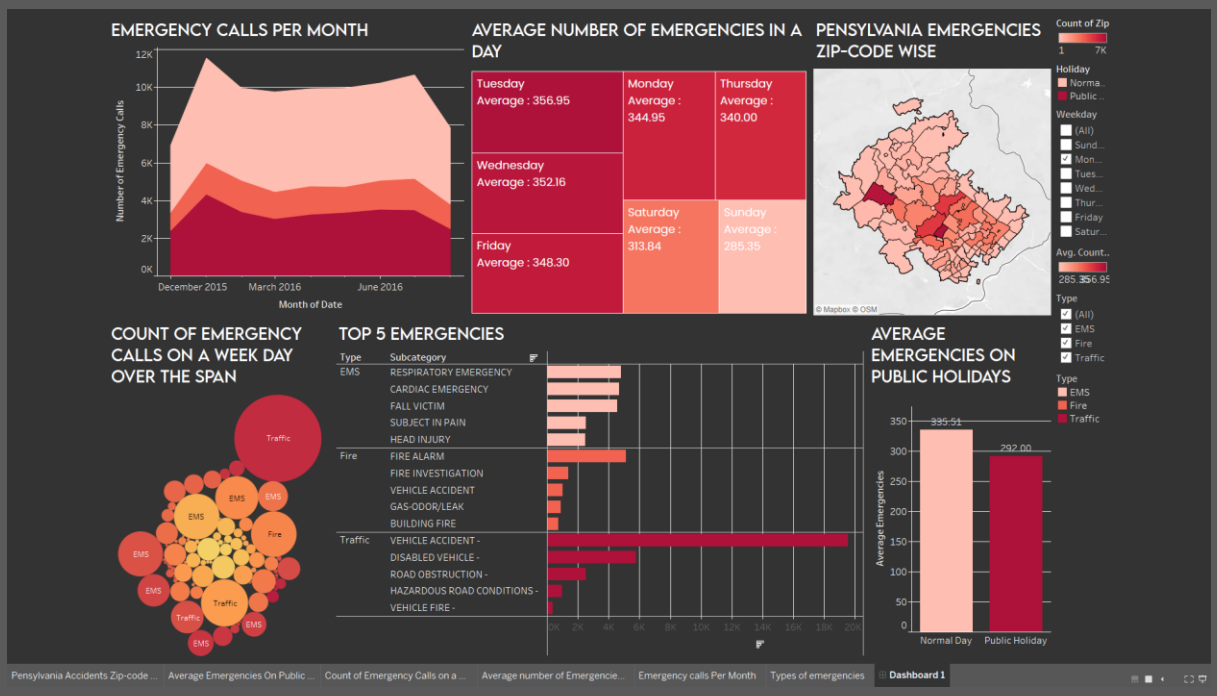
Calculated Field Query:

- Count of Emergencies:

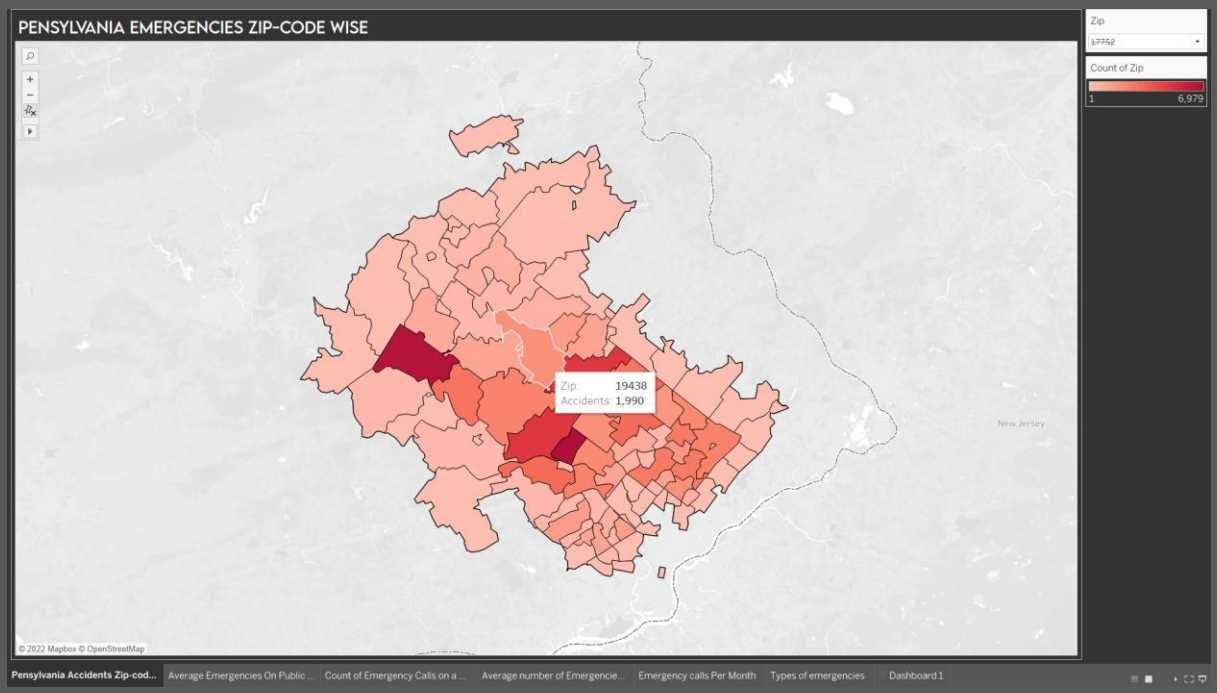
- Sort:



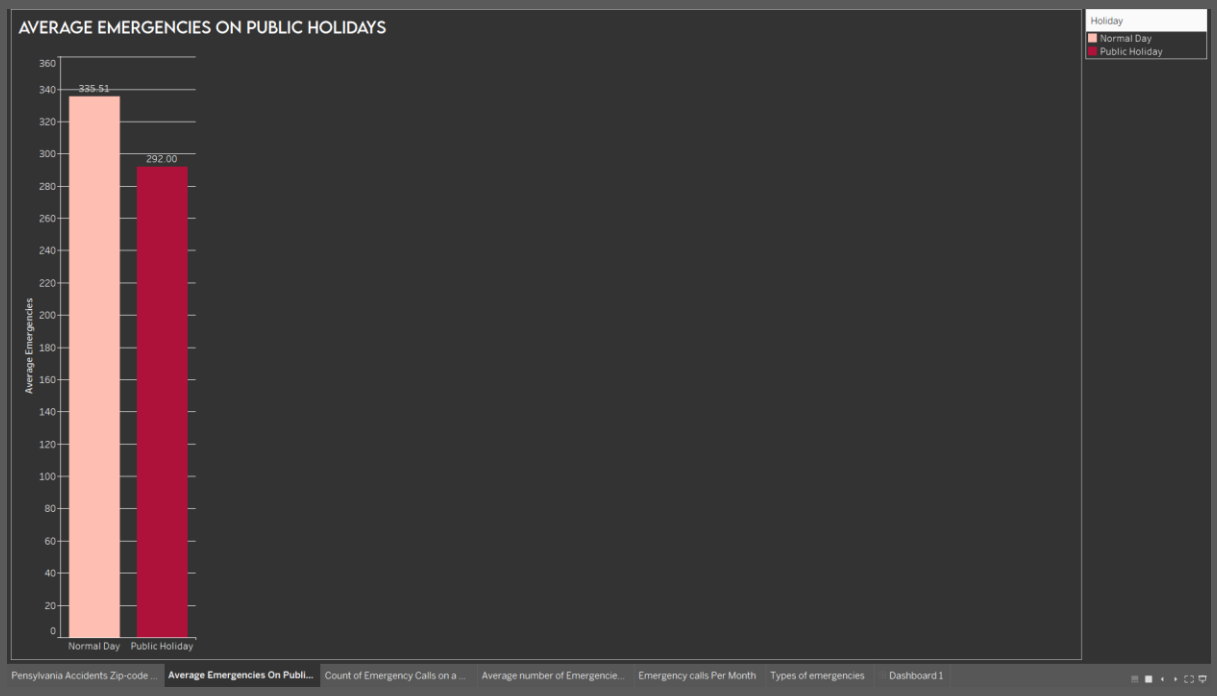
Dashboard:



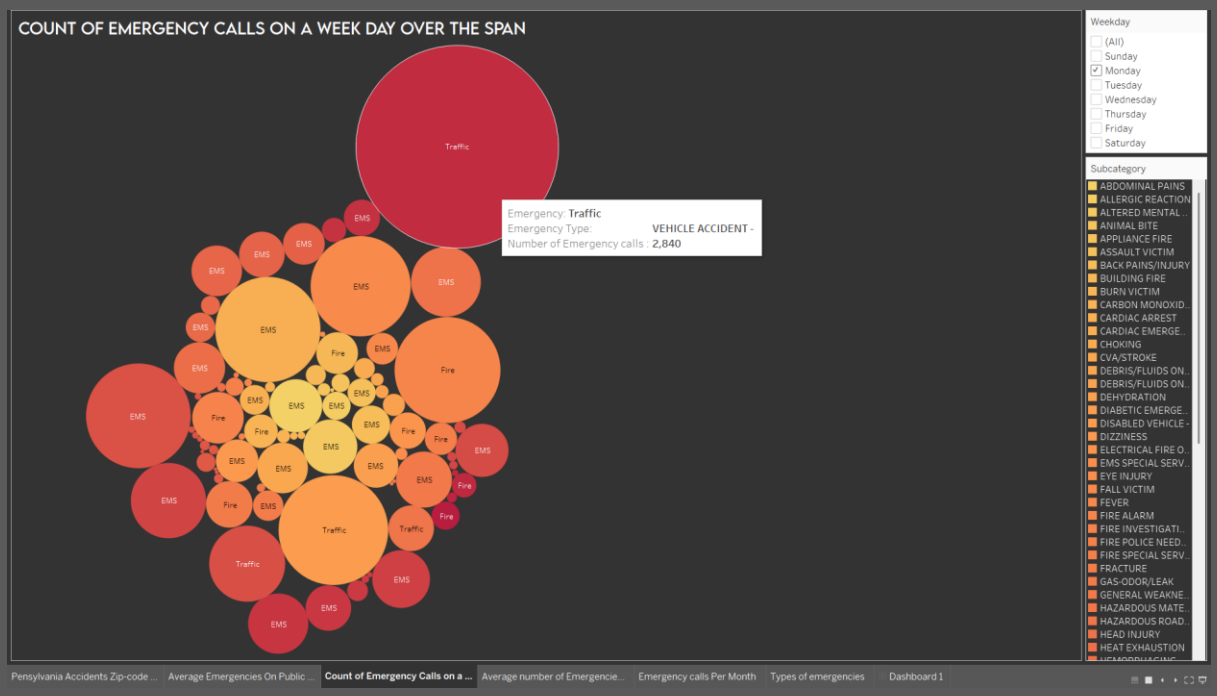
Q1) Calculate the number of Accidents per Zip Code.



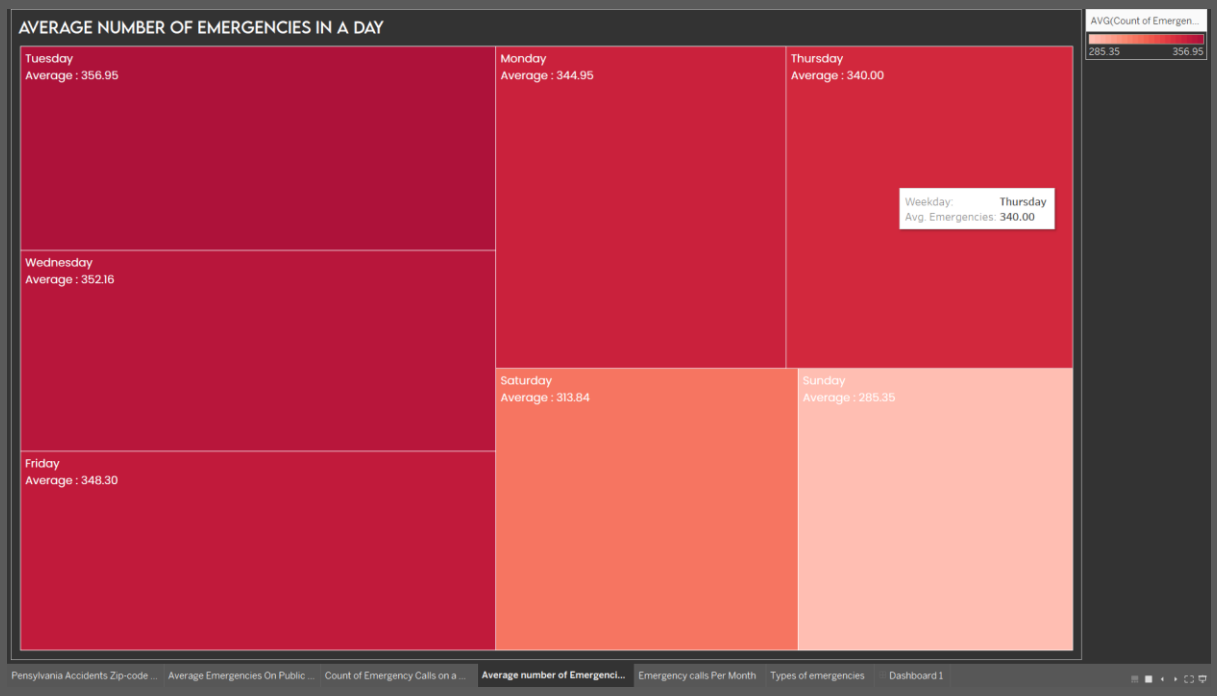
Q2) Calculate avg. number of emergencies on holidays.



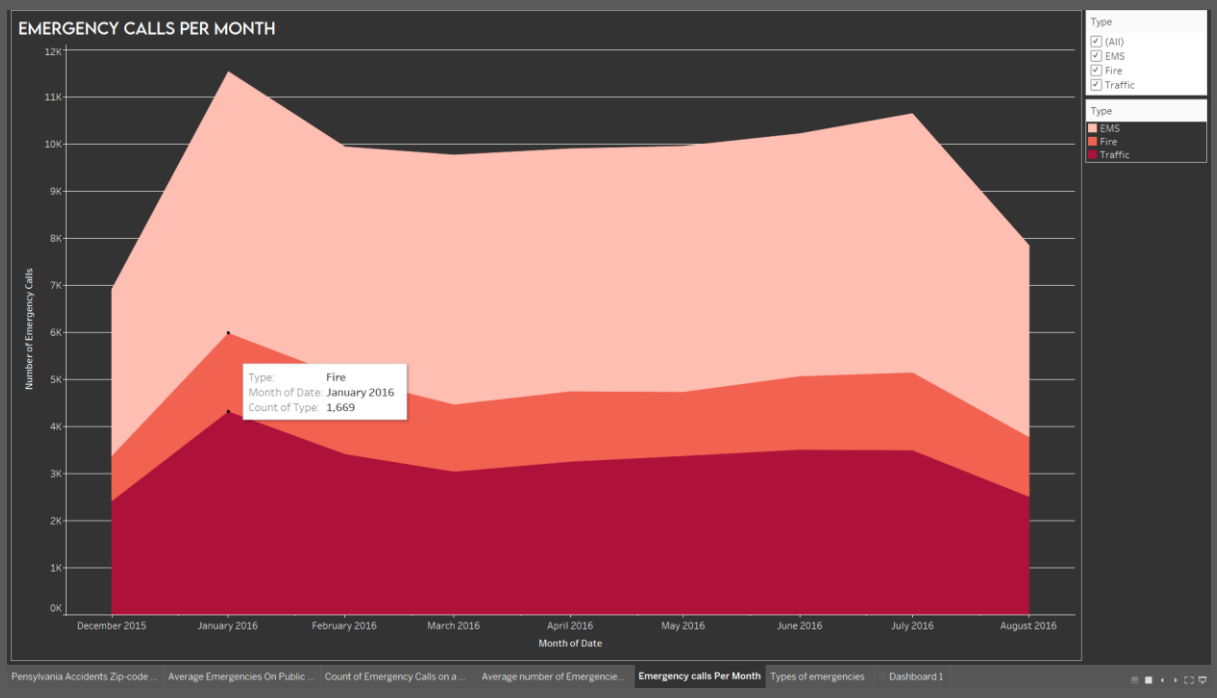
Q3) Calculate the count of various emergency calls on a particular week day.



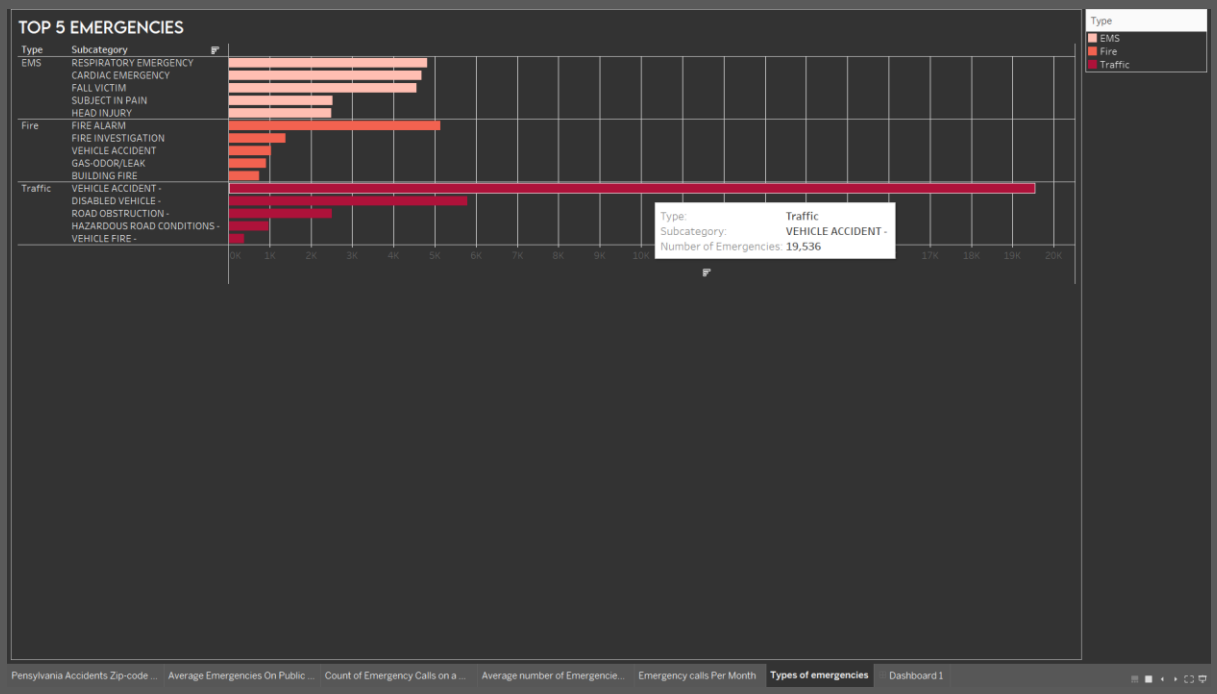
Q4) Calculate the avg. number of emergencies in a day.



Q5) Calculate the Emergency calls month wise along with category.



Q6) Calculate Top 5 emergency calls of each category.



Dashboard File: [102017090_Sai Lohitaksh.tbwx]

THANK YOU