

SummaryStats

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initial data loading

```
Traffic_Weather = read.csv("Traffic_Violations_Clean.csv")  
# Removal of the first column  
Traffic_Weather = Traffic_Weather[,-1]
```

Dates

```
# Import lubridate package  
library(lubridate)
```

```
##  
## Attaching package: 'lubridate'
```

```
## The following object is masked from 'package:base':  
##  
##      date
```

```
# Convert the type to date time  
Traffic_Weather$Date.time = ymd_hms(Traffic_Weather$Date.time)  
# Extract the minimum  
min(Traffic_Weather$Date.time)
```

```
## [1] "2017-01-01 UTC"
```

```
#Extract the maximum  
max(Traffic_Weather$Date.time)
```

```
## [1] "2019-12-31 UTC"
```

Subagency

```
summary(Traffic_Weather$SubAgency)
```

```
##              1st District, Rockville  
##              76460  
##              2nd District, Bethesda  
##              115744  
##              3rd District, Silver Spring
```

```
##                                103232
##                                4th District, Wheaton
##                                146984
##                                5th District, Germantown
##                                71361
## 6th District, Gaithersburg / Montgomery Village
##                                71237
##                                Headquarters and Special Operations
##                                19820
```

```
## Subagency with the most accidents - Wheaton
sort(summary(Traffic_Weather$SubAgency))[length(summary(Traffic_Weather$SubAgency))]
```

```
## 4th District, Wheaton
##                                146984
```

```
## Subagency with the most personal injuries - Wheaton
sort(summary(Traffic_Weather$SubAgency[Traffic_Weather$Personal.Injury == "Yes"]))[7]
```

```
## 4th District, Wheaton
##                                1695
```

Subagency with the most pullovers - Wheaton

Top five crimes in the dataset

```
sort(summary(Traffic_Weather$Description),decreasing = T)[2:6]
```

```
##                                DRIVER FAILURE TO OBEY PROPERLY PLACED TRAFFIC CONTROL DEVICE INSTRUCTIONS
##                                                                54904
##                                FAILURE TO DISPLAY REGISTRATION CARD UPON DEMAND BY POLICE OFFICER
##                                                                27008
##                                DRIVER USING HANDS TO USE HANDHELD TELEPHONE WHILEMOTOR VEHICLE IS IN MOTION
##                                                                17555
##                                DISPLAYING EXPIRED REGISTRATION PLATE ISSUED BY ANY STATE
##                                                                16256
##                                FAILURE OF INDIVIDUAL DRIVING ON HIGHWAY TO DISPLAY LICENSE TO UNIFORMED POLICE ON DEMAND
##                                                                15699
```

Top 5 locations

```
sort(summary(Traffic_Weather$Location), decreasing = T)[1:5]
```

```
##                                (Other) MONTGOMERY VILLAGE AVE @ RUSSELL AVE
##                                568166                                1316
##                                RIVER RD AND ROYAL DOMINION                                RIVER RD @ ROYAL DOMINION DR
##                                895                                753
##                                GEORGIA AVE @ HEWITT AVE
##                                725
```

Deep dive What made these locations so ripe for being pulled over

```
## Not stopping at a red light
```

```
sort(summary(Traffic_Weather$Description[Traffic_Weather$Location == "MONTGOMERY VILLAGE AVE @ RUSSELL AVE"], de
```

```
## DRIVER FAILURE TO OBEY PROPERLY PLACED TRAFFIC CONTROL DEVICE INSTRUCTIONS
##                                     421
##          DRIVER FAILURE TO STOP AT STEADY CIRCULAR RED SIGNAL
##                                     153
##          DRIVER FAIL TO STOP AT RED TRAFFIC SIGNAL BEFORE RIGHT TURN
##                                     141
```

```
## Speeding
```

```
sort(summary(Traffic_Weather$Description[Traffic_Weather$Location == "RIVER RD AND ROYAL DOMINION"], de
```

```
##                                     EXCEEDING THE POSTED SPEED LIMIT OF 35 MPH
##                                     276
##                                     EXCEEDING THE POSTED SPEED LIMIT OF 45 MPH
##                                     140
## DRIVING VEHICLE IN EXCESS OF REASONABLE AND PRUDENT SPEED ON HIGHWAY 53 IN 35
##                                     43
```

```
sort(summary(Traffic_Weather$Description[Traffic_Weather$Location == "RIVER RD @ ROYAL DOMINION DR"], de
```

```
##                                     EXCEEDING THE POSTED SPEED LIMIT OF 35 MPH
##                                     267
##                                     EXCEEDING THE POSTED SPEED LIMIT OF 45 MPH
##                                     148
## DRIVER FAILURE TO OBEY PROPERLY PLACED TRAFFIC CONTROL DEVICE INSTRUCTIONS
##                                     105
```

MONTGOMERY VILLAGE AVE @ RUSSELL AVE intersection is big for not following traffic signals

RIVER RD AND ROYAL DOMINION is big for speeding

Summary stats for temperature

```
summary(Traffic_Weather$Temperature)
```

```
##      Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##      1.20   41.20   57.80   56.43   71.00   97.90
```

Summary stats of Windchill

```
summary(Traffic_Weather$Wind.Chill)
```

```
##      Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
## -12.400   0.000   0.000   8.809  18.200  49.100
```

Summary stats of Heat.Index

```
summary(Traffic_Weather$Heat.Index)
```

```
##      Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.000   0.000   0.000   7.638   0.000  111.400
```

Summary stats of Precipitation

```
summary(Traffic_Weather$Precipitation)
```

```
##      Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
## 0.000000 0.000000 0.000000 0.002498 0.000000 3.000000
```

Summary stats of Snow

```
summary(Traffic_Weather$Snow.Depth)
```

```
##      Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
## 0.000000 0.000000 0.000000 0.003574 0.000000 7.100000
```

Summary stats of Wind

```
summary(Traffic_Weather$Wind.Speed)
```

```
##      Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.000   0.100   4.700   5.372   8.000  32.300
```

Summary stats of Cloud Cover

```
summary(Traffic_Weather$Cloud.Cover)
```

```
##      Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    0.00   0.70   13.90   39.73   90.20  100.00
```

Summary stats of Conditions

```
summary(Traffic_Weather$Conditions)[1:3]
```

```
##      Clear      Overcast Partially cloudy
##    308757    197659      89869
```

Summary stats of Accidents

```
summary(Traffic_Weather$Accident)
```

```
##      No      Yes
## 589184 15654
```

```
## Top location for accidents is HEWITT AVE & RIPPLING BROOK DR Bel Pre Elementary School
sort(summary(Traffic_Weather$Location[Traffic_Weather$Accident == "Yes"]), decreasing = T)[2:6]
```

```
## HEWITT AVE & RIPPLING BROOK DR          CLARA BARTON PKWY
##                                37                      32
##      GEORGIA AVE @ HEWITT AVE    GEORGIA AVE / ASPEN HILL RD
##                                32                      31
##      1006 KERWIN ROAD
##                                28
```

```
sort(summary(Traffic_Weather$Description[Traffic_Weather$Accident == "Yes"]), decreasing = T)[1:5]
```

```
##                                FAILURE TO CONTROL VEHICLE SPEED ON HIGHWAY TO AVOID COLLISION
##                                                                2976
##                                                                (Other)
##                                                                1379
##      NEGLIGENT DRIVING VEHICLE IN CARELESS AND IMPRUDENT MANNER ENDANGERING PROPERTY, LIFE AND PERSON
##                                                                1375
##      DRIVER WHEN TURNING LEFT FAIL TO YIELD RIGHT OF WAY TO VEHICLE APPROACHING FROM OPPOSITE DIRECTION
##                                                                804
##                                DRIVING VEHICLE WHILE UNDER THE INFLUENCE OF ALCOHOL
##                                                                586
```

Summary stats of Personal Injury

```
summary(Traffic_Weather$Personal.Injury)
```

```
##      No      Yes
## 598093  6745
```

```
sort(summary(Traffic_Weather$Location[Traffic_Weather$Personal.Injury == "Yes"]), decreasing = T)[2:6]
```

```
## SCENERY DR/NEELSVILLE CHURCH RD CONNECTICUT AVE @ VEIRS MILL RD
##                                27                      21
##      NORBECK RD AT WALLINGFORD RD    RANDOLPH ROAD / SELFRIDGE ROAD
##                                18                      18
##      UNIVERSITY BLV W @ BRUNETT AVE
##                                18
```

```
sort(summary(Traffic_Weather$Description[Traffic_Weather$Personal.Injury == "Yes"]), decreasing = T)[1:
```

```
##                                FAILURE TO CONTROL VEHICLE SPEED ON HIGHWAY TO AVOID COLLISION
##                                                                1293
##  NEGLIGENT DRIVING VEHICLE IN CARELESS AND IMPRUDENT MANNER ENDANGERING PROPERTY, LIFE AND PERSON
##                                                                625
##                                                                (Other)
##                                                                526
## DRIVER WHEN TURNING LEFT FAIL TO YIELD RIGHT OF WAY TO VEHICLE APPROACHING FROM OPPOSITE DIRECTION
##                                                                407
##                                DRIVER FAILURE TO OBEY PROPERLY PLACED TRAFFIC CONTROL DEVICE INSTRUCTIONS
##                                                                221
```

Summary stats for Property damage

```
summary(Traffic_Weather$Property.Damage)
```

```
##      No      Yes
## 592559  12279
```

```
sort(summary(Traffic_Weather$Location[Traffic_Weather$Property.Damage == "Yes"]), decreasing = T)[2:6]
```

```
## BEL PRE RD/ PARKER FARM WAY          1006 KERWIN ROAD
##                                29                      28
##          301 MARKET ST ASPEN HILL RD / PARKLAND DR
##                                28                      28
##  VIERS MILL RD/RANDOLPH RD
##                                27
```

```
sort(summary(Traffic_Weather$Description[Traffic_Weather$Property.Damage == "Yes"]), decreasing = T)[1:
```

```
##                                FAILURE TO CONTROL VEHICLE SPEED ON HIGHWAY TO AVOID COLLISION
##                                                                1911
##                                                                (Other)
##                                                                1247
##  NEGLIGENT DRIVING VEHICLE IN CARELESS AND IMPRUDENT MANNER ENDANGERING PROPERTY, LIFE AND PERSON
##                                                                831
##                                DRIVING VEHICLE WHILE UNDER THE INFLUENCE OF ALCOHOL
##                                                                487
##          FAILURE OF VEH. DRIVER INVOLVED IN ACCIDENT TO GIVE INSURANCE POLICY INFORMATION
##                                                                388
```

Summary stats for fatal

```
summary(Traffic_Weather$Fatal)
```

```
##      No      Yes
## 604681    157
```

```
sort(summary(Traffic_Weather$Location[Traffic_Weather$Fatal == "Yes"]), decreasing = T)[1:5]
```

```
##      I / 495 @ CONNECTICUT AVENUE
##                                     11
## MONTROSE PARKWAY/EAST JEFFERSON STREET
##                                     6
##      UNIVERSITY BOULEVARD EAST/SEEK LANE
##                                     6
##      E/B CHERRY HILL RD AT GRACEFIELD RD
##                                     5
##      1234 CRESTHAVEN DRIVE
##                                     4
```

```
sort(summary(Traffic_Weather$Description[Traffic_Weather$Fatal == "Yes"]), decreasing = T)[1:5]
```

```
## NEGLIGENCE DRIVING VEHICLE IN CARELESS AND IMPRUDENT MANNER ENDANGERING PROPERTY, LIFE AND PERSON
##                                                                                                     18
##      DRIVER FAILURE TO OBEY PROPERLY PLACED TRAFFIC CONTROL DEVICE INSTRUCTIONS
##                                                                                                     7
##      EXCEEDING THE POSTED SPEED LIMIT OF 40 MPH
##                                                                                                     6
##      FAILURE TO CONTROL VEHICLE SPEED ON HIGHWAY TO AVOID COLLISION
##                                                                                                     6
##      DRIVER FAILURE TO STOP FOR PEDESTRIAN IN CROSSWALK
##                                                                                                     5
```

Summary stats of Alcohol

```
summary(Traffic_Weather$Alcohol)
```

```
##      No      Yes
## 604474    364
```

```
sort(summary(Traffic_Weather$Location[Traffic_Weather$Alcohol == "Yes"]), decreasing = T)[1:5]
```

```
##      GEORGIA AVE / ROSSMOOR BLVD      CONNECTICUT AVE / ADAMS DR
##                                     18                                     17
##      FREDERICK RD AND SCENERY DR WESTLAKE DRIVE @ DEMOCRACY BLVD
##                                     17                                     16
##      RANDOLPH ROAD / LINDELL ST
##                                     14
```

```
sort(summary(Traffic_Weather$Description[Traffic_Weather$Alcohol == "Yes"]), decreasing = T)[1:5]
```

```
## PERSON DRIVING MOTOR VEHICLE ON HIGHWAY OR PUBLIC USE PROPERTY ON SUSPENDED LICENSE AND PRIVILEGE
##                                                                                               40
##          DRIVING MOTOR VEHICLE ON HIGHWAY WITHOUT REQUIRED LICENSE AND AUTHORIZATION
##                                                                                               24
##          FAILURE OF INDIVIDUAL DRIVING ON HIGHWAY TO DISPLAY LICENSE TO UNIFORMED POLICE ON DEMAND
##                                                                                               20
##          PERSON DRIVING MOTOR VEHICLE WHILE LICENSE SUSPENDED UNDER TR 17-106, 26-204, 26-206, 27-103
##                                                                                               17
##          DRIVING VEHICLE WHILE UNDER THE INFLUENCE OF ALCOHOL
##                                                                                               15
```

Top reasons searches were conducted

Where they were conducted

What was the cause

```
summary(Traffic_Weather$Search.Conducted)
```

```
##      No      Yes
## 577932 26906
```

```
sort(summary(Traffic_Weather$Location[Traffic_Weather$Search.Conducted == "Yes"]), decreasing = T)[1:5]
```

```
##          (Other)
##          24108
##          WAYNE AVE / DALE DR
##          84
##          GEORGIA AVE / REEDIE DR
##          74
## UNIVERSITY BLVD EAST AT PINEY BRANCH RD.
##          52
##          UNIVERSITY BLVD E / PINEY BRANCH RD
##          49
```

```
sort(summary(Traffic_Weather$Description[Traffic_Weather$Search.Conducted == "Yes"]), decreasing = T)[1:
```

```
##          (Other)
##          3828
##          DRIVING VEHICLE WHILE UNDER THE INFLUENCE OF ALCOHOL
##          1825
##          DRIVING VEH. WHILE IMPAIRED BY ALCOHOL
##          1357
## NEGLIGENT DRIVING VEHICLE IN CARELESS AND IMPRUDENT MANNER ENDANGERING PROPERTY, LIFE AND PERSON
##          1322
##          DRIVER FAILURE TO OBEY PROPERLY PLACED TRAFFIC CONTROL DEVICE INSTRUCTIONS
##          1074
```


Search disposition

```
sort(summary(Traffic_Weather$Search.Disposition), decreasing = T)
```

```
##              NA's              Nothing              Contraband Only
##              577932              10858              7720
##      Property Only Contraband and Property              DUI
##              4248              4072              8
```

What kind of search was done

```
sort(summary(Traffic_Weather$Search.Type), decreasing = T)
```

```
##      NA's      Both      Person Property
##      577932      21296      2877      2733
```

State

```
sort(summary(Traffic_Weather$State), decreasing = T)
```

```
##      MD      VA      DC      XX      PA      TX      FL      WV      NC      NY
## 521567 29775 15952 4746 4209 3987 3016 3009 2346 1898
##      NJ      DE      GA      CA      OH      MA      SC      IL      TN      AZ
## 1611 1255 1241 972 787 734 663 645 583 556
##      MI      IN      CT      AL      OK      KY      CO      US      MO      WA
## 511 421 387 297 263 253 243 224 221 221
##      MS      LA      WI      MN      AR      ME      IA      NM      RI      NV
## 206 201 171 167 149 128 114 101 98 87
##      UT      NH      OR      AK      ON      VT      ND      ID      MT      KS
## 86 83 83 70 70 64 61 52 50 48
##      NE      SD      HI      WY      VI      AB      NB      QC      GU      MB
## 44 41 19 13 9 6 6 6 4 3
##      NS      AS      BC      SK
## 2 1 1 1
```

Reason someone was searched

```
sort(summary(Traffic_Weather$Search.Reason),decreasing = T)[1:5]
```

```
##              NA's Incident to Arrest              Probable Cause
##              577932              14575              8564
##      Consensual              K-9
##              2797              556
```

What kind of vehicle was stopped and what color

```
sort(summary(Traffic_Weather$Color), decreasing = T)[1:5]
```

```
## BLACK SILVER WHITE GRAY RED
## 132644 110437 101524 77269 44879
```

```
sort(summary(Traffic_Weather$VehicleType), decreasing = T)[1:5]
```

```
##          02 - Automobile 05 - Light Duty Truck          28 - Other
##                   547939                   25610                   8326
##    03 - Station Wagon          01 - Motorcycle
##                   6648                   4603
```

Racial Breakdown - Black

Where it occurred

What was the search used

Why were they searched

```
summary(Traffic_Weather$Race)
```

```
##          ASIAN          BLACK          HISPANIC NATIVE AMERICAN
##          35149          197558          137839          804
##          OTHER          WHITE
##          37921          195567
```

```
sort(summary(Traffic_Weather$Location[Traffic_Weather$Race == "BLACK"]), decreasing = T)[2:6]
```

```
##          COLESVILLE RD @ GEORGIA AVE          WAYNE AVE @ DALE DR
##                   466                   450
## MONTGOMERY VILLAGE AVE @ RUSSELL AVE          GEORGIA AVE / COLESVILLE RD
##                   403                   342
##          GEORGIA AVE @ COLESVILLE RD
##                   336
```

```
sort(summary(Traffic_Weather$Description[Traffic_Weather$Race == "BLACK"]), decreasing = T)[2:6]
```

```
##          DRIVER FAILURE TO OBEY PROPERLY PLACED TRAFFIC CONTROL DEVICE INSTRUCTIONS
##                   15930
##          FAILURE TO DISPLAY REGISTRATION CARD UPON DEMAND BY POLICE OFFICER
##                   9496
## FAILURE OF INDIVIDUAL DRIVING ON HIGHWAY TO DISPLAY LICENSE TO UNIFORMED POLICE ON DEMAND
##                   5787
##          DRIVING VEHICLE ON HIGHWAY WITH SUSPENDED REGISTRATION
##                   5748
##          DISPLAYING EXPIRED REGISTRATION PLATE ISSUED BY ANY STATE
##                   5660
```

```
sort(summary(Traffic_Weather$Search.Disposition[Traffic_Weather$Race == "BLACK"]), decreasing = T)[2:6]
```

```
##          Nothing          Contraband Only Contraband and Property
##          3961          3776          2052
##      Property Only          DUI
##          1560          0
```

```
sort(summary(Traffic_Weather$Search.Reason[Traffic_Weather$Race == "BLACK"]), decreasing = T)[2:6]
```

```
##      Probable Cause Incident to Arrest          Consensual
##          4921          4565          1368
##          K-9          Other
##          326          112
```

Racial Breakdown - White

Where it occurred

What was the search used

Why were they searched

```
sort(summary(Traffic_Weather$Location[Traffic_Weather$Race == "WHITE"]), decreasing = T)[2:6]
```

```
##          RIVER RD AND ROYAL DOMINION MONTGOMERY VILLAGE AVE @ RUSSELL AVE
##          479          463
##      RIVER RD @ ROYAL DOMINION DR          21600 BLK BEALLSVILLE RD
##          440          273
##          RIVER RD/WESTBARD AVE
##          271
```

```
sort(summary(Traffic_Weather$Description[Traffic_Weather$Race == "WHITE"]), decreasing = T)[2:6]
```

```
##      DRIVER FAILURE TO OBEY PROPERLY PLACED TRAFFIC CONTROL DEVICE INSTRUCTIONS
##          20681
##          FAILURE TO DISPLAY REGISTRATION CARD UPON DEMAND BY POLICE OFFICER
##          8392
##      DRIVER USING HANDS TO USE HANDHELD TELEPHONE WHILEMOTOR VEHICLE IS IN MOTION
##          7468
##          DISPLAYING EXPIRED REGISTRATION PLATE ISSUED BY ANY STATE
##          6470
##          DRIVER FAILURE TO STOP AT STOP SIGN LINE
##          5988
```

```
sort(summary(Traffic_Weather$Search.Disposition[Traffic_Weather$Race == "WHITE"]), decreasing = T)[2:6]
```

```
##          Nothing          Contraband Only          Property Only
##          2545          1528          1146
##      Contraband and Property          DUI
##          837          0
```

```
sort(summary(Traffic_Weather$Search.Reason[Traffic_Weather$Race == "WHITE"]), decreasing = T)[2:6]
```

```
## Incident to Arrest      Probable Cause      Consensual
##           3665              1374              689
##           K-9              Other
##           169              117
```

Racial Breakdown - Hispanic

Where it occurred

What was the search used

Why were they searched

```
sort(summary(Traffic_Weather$Location[Traffic_Weather$Race == "HISPANIC"]), decreasing = T)[2:6]
```

```
##           GEORGIA AVE @ HEWITT AVE      GEORGIA AVE @ RANDOLPH RD
##                               304              215
## MONTGOMERY VILLAGE AVE @ RUSSELL AVE    UNIVERSITY BLVD @ REEDIE DRIVE
##                               209              193
##           GEORGIA AVE/ URBANA
##                               184
```

```
sort(summary(Traffic_Weather$Description[Traffic_Weather$Race == "HISPANIC"]), decreasing = T)[2:6]
```

```
##           DRIVER FAILURE TO OBEY PROPERLY PLACED TRAFFIC CONTROL DEVICE INSTRUCTIONS
##                               10755
##           FAILURE TO DISPLAY REGISTRATION CARD UPON DEMAND BY POLICE OFFICER
##                               5518
## FAILURE OF INDIVIDUAL DRIVING ON HIGHWAY TO DISPLAY LICENSE TO UNIFORMED POLICE ON DEMAND
##                               4842
##           DRIVER USING HANDS TO USE HANDHELD TELEPHONE WHILEMOTOR VEHICLE IS IN MOTION
##                               3241
##           DRIVING MOTOR VEHICLE ON HIGHWAY WITHOUT REQUIRED LICENSE AND AUTHORIZATION
##                               2871
```

```
sort(summary(Traffic_Weather$Search.Disposition[Traffic_Weather$Race == "HISPANIC"]), decreasing = T)[2:6]
```

```
##           Nothing      Contraband Only      Property Only
##           3644              1920              1364
## Contraband and Property      DUI
##           986              8
```

```
sort(summary(Traffic_Weather$Search.Reason[Traffic_Weather$Race == "HISPANIC"]), decreasing = T)[2:6]
```

```
## Incident to Arrest      Probable Cause      Consensual
##           5454              1760              586
##           K-9              Other
##           42              42
```

Racial Breakdown - Asian

Where it occurred

What was the search used

Why were they searched

```
sort(summary(Traffic_Weather$Location[Traffic_Weather$Race == "ASIAN"]), decreasing = T)[2:6]
```

```
## MONTGOMERY VILLAGE AVE @ RUSSELL AVE SHADY GROVE RD/PINEY MEETINGHOUSE RD
##                                     128                                     105
##           RIVER RD AND ROYAL DOMINION                               RIVER RD AT GARY RD
##                                     75                                     74
##           RIVER RD @ ROYAL DOMINION DR
##                                     61
```

```
sort(summary(Traffic_Weather$Description[Traffic_Weather$Race == "ASIAN"]), decreasing = T)[2:6]
```

```
## DRIVER FAILURE TO OBEY PROPERLY PLACED TRAFFIC CONTROL DEVICE INSTRUCTIONS
##                                     3792
##           FAILURE TO DISPLAY REGISTRATION CARD UPON DEMAND BY POLICE OFFICER
##                                     1930
##                                     DRIVER FAILURE TO STOP AT STOP SIGN LINE
##                                     1362
## DRIVER USING HANDS TO USE HANDHELD TELEPHONE WHILE MOTOR VEHICLE IS IN MOTION
##                                     1134
##           DISPLAYING EXPIRED REGISTRATION PLATE ISSUED BY ANY STATE
##                                     971
```

```
sort(summary(Traffic_Weather$Search.Disposition[Traffic_Weather$Race == "ASIAN"]), decreasing = T)[2:6]
```

```
##           Nothing           Contraband Only           Property Only
##           384             163             110
## Contraband and Property           DUI
##           79             0
```

```
sort(summary(Traffic_Weather$Search.Reason[Traffic_Weather$Race == "ASIAN"]), decreasing = T)[2:6]
```

```
## Incident to Arrest           Probable Cause           Consensual
##           477             192             53
##           K-9             Other
##           10             4
```

Gender

What kinds of things did females get pulled over for?

```
summary(Traffic_Weather$Gender)
```

```
##      F      M      U
## 197777 406009 1052
```

```
sort(summary(Traffic_Weather$Description[Traffic_Weather$Gender == "F"]), decreasing = T)[2:6]
```

```
## DRIVER FAILURE TO OBEY PROPERLY PLACED TRAFFIC CONTROL DEVICE INSTRUCTIONS
##                                     20474
## FAILURE TO DISPLAY REGISTRATION CARD UPON DEMAND BY POLICE OFFICER
##                                     9975
## DRIVER USING HANDS TO USE HANDHELD TELEPHONE WHILE MOTOR VEHICLE IS IN MOTION
##                                     7464
## DISPLAYING EXPIRED REGISTRATION PLATE ISSUED BY ANY STATE
##                                     6499
## DRIVER FAILURE TO STOP AT STOP SIGN LINE
##                                     5584
```

Where do these drivers come from?

```
sort(summary(Traffic_Weather$Driver.City), decreasing = T)
```

```
## SILVER SPRING      GAITHERSBURG      ROCKVILLE
##      150053      63381      51675
## GERMANTOWN      (Other)      WASHINGTON
##      50307      45057      20367
## BETHESDA MONTGOMERY VILLAGE      HYATTSVILLE
##      17437      17105      13495
## POTOMAC      OLNEY      LAUREL
##      12000      9296      8730
## CLARKSBURG      FREDERICK      KENSINGTON
##      8134      8090      6886
## TAKOMA PARK      NORTH POTOMAC      BURTONSVILLE
##      6565      6339      5208
## DAMASCUS      BELTSVILLE      CHEVY CHASE
##      4930      4915      4871
## BALTIMORE      DERWOOD      BOYDS
##      4561      3974      3652
## COLUMBIA      BOWIE      ADELPHI
##      3613      3512      3046
## POOLESVILLE      ALEXANDRIA      BROOKEVILLE
##      2930      2851      2835
## UPPER MARLBORO      WHEATON      LANHAM
##      2815      2750      2693
## MOUNT AIRY      GREENBELT      ARLINGTON
##      1987      1984      1822
## RIVERDALE      COLLEGE PARK      HAGERSTOWN
##      1802      1711      1569
## WOODBRIDGE      NORTH BETHESDA      ELLICOTT CITY
```

```
##          1470          1423          1372
##      FAIRFAX    CAPITOL HEIGHTS    WALDORF
##          1146          1140          1056
##      CLINTON    FALLS CHURCH    DARNESTOWN
##          1053          1029          1022
##  NEW CARROLLTON    FORT WASHINGTON    DISTRICT HEIGHTS
##          1004          985          964
##      TEMPLE HILLS    SANDY SPRING    GLEN BURNIE
##          892          877          836
##      LAYTONSVILLE    ASHTON    SUITLAND
##          801          783          726
##      DICKERSON    OXON HILL    ELKBRIDGE
##          712          708          686
##      MCLEAN    SPRINGFIELD    MANASSAS
##          684          676          661
##      ANNAPOLIS    OWINGS MILLS    MONROVIA
##          658          658          645
##      STERLING    MOUNT RAINIER    LANDOVER
##          633          592          585
##      BLADENSBURG    VIENNA    WESTMINSTER
##          581          553          551
##      NEW MARKET    IJAMSVILLE    CLARKSVILLE
##          548          545          541
##      HERNDON    ANNANDALE    ASHBURN
##          523          521          486
##      LEESBURG    WOODBINE    SEVERN
##          482          477          476
##      ODENTON    HANOVER    RESTON
##          463          457          428
##      WINDSOR MILL    CATONSVILLE    BROOKLYN
##          428          423          391
##      BRENTWOOD    PHILADELPHIA    SYKESVILLE
##          387          387          387
##      N BETHESDA    CENTREVILLE    MARTINSBURG
##          386          385          385
##      GLENN DALE    MITCHELLVILLE    WALKERSVILLE
##          354          353          342
##      MIDDLETOWN    GWYNN OAK    RANDALLSTOWN
##          332          326          326
##      NA's
##          189
```

How many got arrested and what caused their arrest?

```
summary(Traffic_Weather$Arrest)
```

```
##      Mode   FALSE   TRUE
## logical 585269 19569
```

```
sort(summary(Traffic_Weather$Description[Traffic_Weather$Arrest == T]), decreasing = T)[1:5]
```

```
## (Other)
## 2552
## DRIVING VEHICLE WHILE UNDER THE INFLUENCE OF ALCOHOL
## 1725
## DRIVING VEH. WHILE IMPAIRED BY ALCOHOL
## 1283
## NEGLIGENT DRIVING VEHICLE IN CARELESS AND IMPRUDENT MANNER ENDANGERING PROPERTY, LIFE AND PERSON
## 1218
## DRIVER FAILURE TO OBEY PROPERLY PLACED TRAFFIC CONTROL DEVICE INSTRUCTIONS
## 817
```

Reason for arrest

```
summary(Traffic_Weather$Arrest.Reason)
```

```
## Criminal      DUI      Other      Search      Stop      Warrant      NA's
##          2          7      1869      4561      12039      1091      585269
```

```
sort(summary(Traffic_Weather$Description[Traffic_Weather$Arrest.Reason == "Stop"]), decreasing = T)[2:6]
```

```
## DRIVING VEHICLE WHILE UNDER THE INFLUENCE OF ALCOHOL
## 1462
## (Other)
## 1315
## DRIVING VEH. WHILE IMPAIRED BY ALCOHOL
## 1124
## NEGLIGENT DRIVING VEHICLE IN CARELESS AND IMPRUDENT MANNER ENDANGERING PROPERTY, LIFE AND PERSON
## 975
## RECKLESS DRIVING VEHICLE IN WANTON AND WILLFUL DISREGARD FOR SAFETY OF PERSONS AND PROPERTY
## 696
```