Final Project Report

1. What is the call volume (by day/week/month/year)
   * The count of calls that are received by the fire department based on (weekday/weekend) /month and year

New Column for weekday or weekend: if (Fire\_Department\_Calls\_for\_Service [Day of week] ="Saturday" ||Fire\_Department\_Calls\_for\_Service [Day of week] ="Sunday" || Fire\_Department\_Calls\_for\_Service [Day of week] ="Friday", "Weekend", "Weekday")

* More number of Calls are received during weekdays and most the calls are received on the month of October in the year 2017.

Chart, bar chart

Description automatically generated

1. Which zip code has highest number of incidents recorded?
   * The highest number of Incidents that are recorded, by considering the Zip code.

* Zipcode 94102 has recorded highest number of incidents.

Chart, line chart

Description automatically generated

1. Does the weekday/ weekend affect the response time? Which takes longer response time?
   * Finding the count of Incidents that are occurred on day of a week
   * Goal to find out the weekday/weekend has a greater number of Incidents recorded.

New Column Created: Day of week = Switch (WEEKDAY (Fire\_Department\_Calls\_for\_Service [Entry DtTm],2),1,"Monday",2, "Tuesday", 3, "Wednesday", 4, "Thursday", 5, "Friday" , 6, "Saturday", 7,"Sunday")

* From our previous analysis weekdays have recorded highest number of calls received by the firefighters; In the weekdays Friday has recorded the highest number of calls received.

Chart, line chart

Description automatically generated

1. Which call type are more frequent during weekend and weekday
   * Aim is to find, which call type group has received more calls on the weekdays and weekends.

Used column: Weekday or Weekend = if (Fire\_Department\_Calls\_for\_Service [Day of week] ="Saturday" ||Fire\_Department\_Calls\_for\_Service [Day of week] ="Sunday" || Fire\_Department\_Calls\_for\_Service [Day of week] ="Friday", "Weekend", "Weekday")

* Apart from other type calls, potentially Life-Threatening call type group has received more calls both on the weekdays and weekends.

1. Finding the average call delay time?
   * According to the chief, the time from the call received to the time the team is dispatched from the unit is 60seconds.
   * Call delay time is the difference between the time that the fire fighters received the call and the dispatched time.
   * My goal is to observe the average call delay time is 60 seconds or not.

New Column created: Call delay time per minute = DATEDIFF (Fire\_Department\_Calls\_for\_Service [Received DtTm], Fire\_Department\_Calls\_for\_Service [Dispatch DtTm], MINUTE)

Graphical user interface, text, application

Description automatically generated

* The average time taken by firefighters to respond for the incident after receiving the call (Call received time to firefighters dispatch time)

1. What is the average response time from the fire department location to the incident location per unit type? Which unit type has taken highest time to reach?
   * According to the chief, the unit should be on the Scene within the 8 minutes
   * My Aim is to check the average response time for each unit type is within 8 minutes or not and observing which unit type has taken highest time.

New Column: Response time = DATEDIFF (Fire\_Department\_Calls\_for\_Service [Received DtTm], Fire\_Department\_Calls\_for\_Service [On Scene DtTm], MINUTE)

* Apart from the Investigation unit type, support unit type has taken the highest time to reach the incident location.

1. Which month and year has recorded highest number of incidents, and did the firefighters maintain the average response time of 8 minutes?
   * Goal is to find the maximum/highest number of incidents with the average response time of 8 minutes by month and year.

New Column: Goal Met = if (Fire\_Department\_Calls\_for\_Service [Transportation time from location to incident location] <8, "Yes", "No")

* December 2002 has the highest number of incidents recorded with an average response time of 5.24 minutes where the goal is met.
* Days with more accidents with average response time and see if the goal is met in those peak days

Table

Description automatically generated

1. Find the area with longer response time?
   * Few Zip codes may take longer time to reach.
   * My Aim is to find such areas which take long response time, so that number of units can be increased in that area.

* Treasure Island has the longest response time, the number of units should be increased in that neighbourhood area.
* Areas that take longer to reach. Aim is to determine such areas so that number of units can be increased in that area.

Table

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1. Which month and year has recorded the highest number of emergency and non-emergency incidents?
   * Goal is to find out the highest number of incidents recorded with considering the final priority as the emergency.

New Column: Required Hospital Admission = if (Fire\_Department\_Calls\_for\_Service [Hospital DtTm] = BLANK (), "No","Yes")

* In the below graph we can observe the incidents which require the hospital admission.
* Call incidents with the final call priority as Emergency(code=3) and

Non-Emergency(code=2)

Chart, bar chart

Description automatically generated

1. Find the count of incidents that require a hospital admission?
   * Goal is to find out the total count of incidents that are severe, the effected people in the incidents should need to be admitted into the hospitals.

Chart, bar chart

Description automatically generated

* By considering the final call priority as emergency, the record has 689763 of the required hospital admissions.
* Among all these million cases, 689763 cases have priority as emergency.

Graphical user interface, application, Teams

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Chart, bar chart

Description automatically generated

* Slicers that we have used in our analysis:

Graphical user interface, chart

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Unit type Slicer

Graphical user interface, application

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Call type group Slicer

Graphical user interface, application

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Final call priority Slicer with 3 as Emergency and 2 as non-Emergency.

Graphical user interface

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I have considered the number of alarms slicers, we have 5 alarms

Graphical user interface, chart, application

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Call Type slicer