

Dashboard KPIs

1. First, we develop the calculations for the dashboard.

- **Calculation for Current Year (CY) Accidents**

The screenshot shows the Tableau interface with a list of fields on the left: Urban or Rural Area, Vehicle Type, Weather Conditions, Year of Accident Date, Measure Names, CY Accidents (selected), Latitude, Longitude, Number of Casualties, Number of Vehicles, PY Accidents, and accident data.csv (Cou...). The 'Parameters' section shows 'Current Year'. The 'Detail' shelf contains 'AGG(CY Accid..)' and 'AGG(PY Accid..)'. The 'Tooltip' shelf is empty. The 'CY Accidents' calculation window is open, showing the following DAX formula:

```
count (IF  
YEAR([Accident Date]) = [Current Year]  
THEN  
[Index]  
END)
```

The calculation is valid. 1 Dependency. Apply OK

Meaning, the year of accident date should be equal to the current year. Eg. If the current date is 2022, then the accident date should be equal to 2022.

- **Calculation for Previous Year (PY) Accidents**

The screenshot shows the Tableau interface with a list of fields on the left: Urban or Rural Area, Vehicle Type, Weather Conditions, Year of Accident Date, Measure Names, CY Accidents, Latitude, Longitude, Number of Casualties, Number of Vehicles, PY Accidents (selected), and accident data.csv (Cou...). The 'Parameters' section shows 'Current Year'. The 'Detail' shelf contains 'AGG(CY Accid..)' and 'AGG(PY Accid..)'. The 'Tooltip' shelf is empty. The 'PY Accidents' calculation window is open, showing the following DAX formula:

```
count (IF  
YEAR([Accident Date]) = [Previous Year]  
THEN  
[Index]  
END)
```

The calculation is valid. 1 Dependency. Apply OK

- **YoY Accidents**

The screenshot shows the 'YoY Accidents' calculation window. The formula is:

```
(([CY Accidents]) - [PY Accidents]) / [PY Accidents]
```

The calculation is valid. Apply OK

Change the number format property of YoY accident so as to display values as a % instead of

Total Accidents

144,419

163,554

-0.1170

Default Number Format [YoY Accidents] ✕

Automatic

Number (Standard)

Number (Custom)

Currency (Standard)

Currency (Custom)

Scientific

Percentage

Custom

Custom

Format:

▲0.00%;▼0.00%

Clear OK Cancel

▲0.00%(for digits before decimal); ▼0.00%(for digits after decimal)

Total Accidents

144,419

163,554

11.70%

- **CY Casualties**

CY Casualties

```
SUM(if YEAR([Accident Date])=[Current Year]
THEN[Number of Casualties] END)
```

- ***CY Fatal Casualties***

Calculation for Current Year (CY) Fatal Casualties

CY Fatal Casualties

```
SUM(IF [Accident Severity]='Fatal'
and YEAR([Accident Date]) = [Current Year]
THEN [Number of Casualties] END)
```

- ***PY Fatal Casualties***

Calculation for Previous Year (PY) Fatal Casualties

PY Fatal Casualties

```
SUM(IF [Accident Severity]='Fatal'
and YEAR([Accident Date]) = [Previous Year]
THEN [Number of Casualties] END)
```

- ***YoY Fatal Casualties***

Calculation for Year on Year (YoY) Fatal Casualties

YoY Fatal Casualties

```
([CY Fatal Casualties]-[PY Fatal Casualties])/[PY Fatal Casualties]
```

- ***CY Serious Casualties***

Calculation for Current Year (CY) Serious Casualties

CY Serious Casualties

```
SUM(IF [Accident Severity]='Serious'
and YEAR([Accident Date]) = [Current Year]
THEN [Number of Casualties] END)
```

- ***PY Serious Casualties***

Calculation for Previous Year (PY) Serious Casualties

PY Serious Casualties

```
SUM(IF [Accident Severity]='Serious'
and YEAR([Accident Date]) = [Previous Year]
THEN [Number of Casualties] END)
```

- **YoY Serious Casualties**

Calculation for Year on Year (YoY) Serious Casualties

YoY Serious Casualties



$$\frac{([CY \text{ Serious Casualties}] - [PY \text{ Serious Casualties}])}{[PY \text{ Serious Casualties}]}$$

- **CY Slight Casualties**

Calculation for Current Year (CY) Slight Casualties

CY Slight Casualties

```
SUM(IF [Accident Severity]='Slight'
and YEAR([Accident Date]) = [Current Year]
THEN [Number of Casualties] END)
```

- **PY Slight Casualties**

Calculation for Previous Year (PY) Slight Casualties

PY Slight Casualties

```
SUM(IF [Accident Severity]='Slight'
and YEAR([Accident Date]) = [Previous Year]
THEN [Number of Casualties] END)
```

YoY Serious Casualties

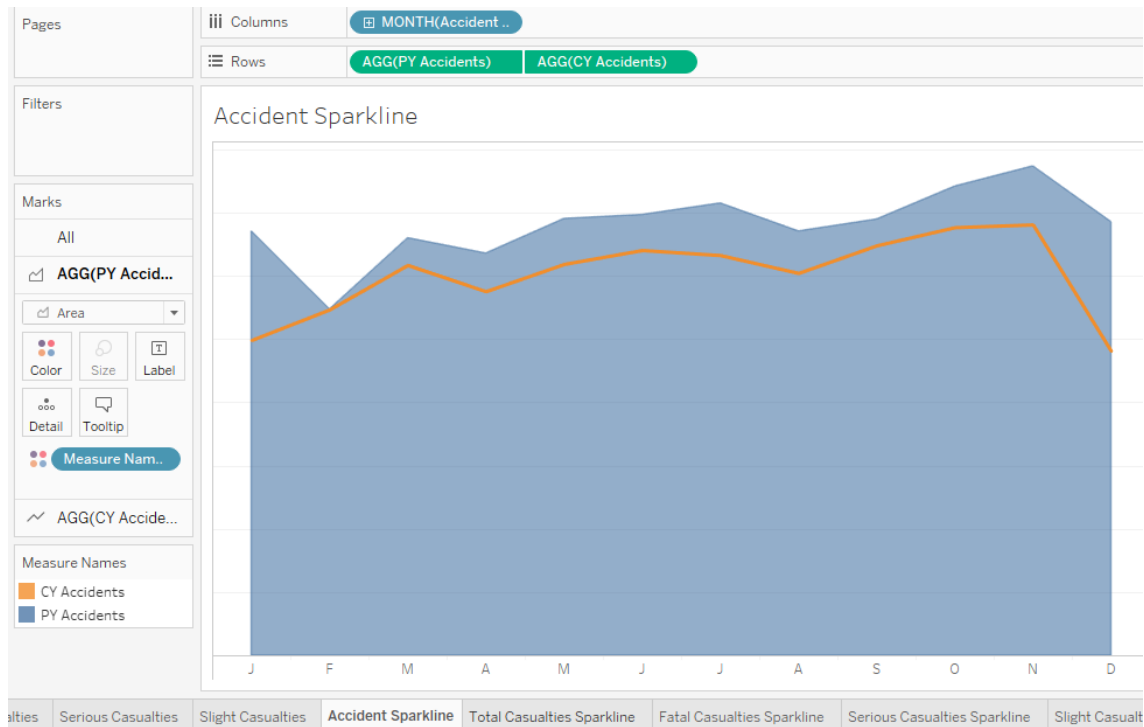
Calculation for Year on Year (YoY) Serious Casualties

YoY Slight Casualties

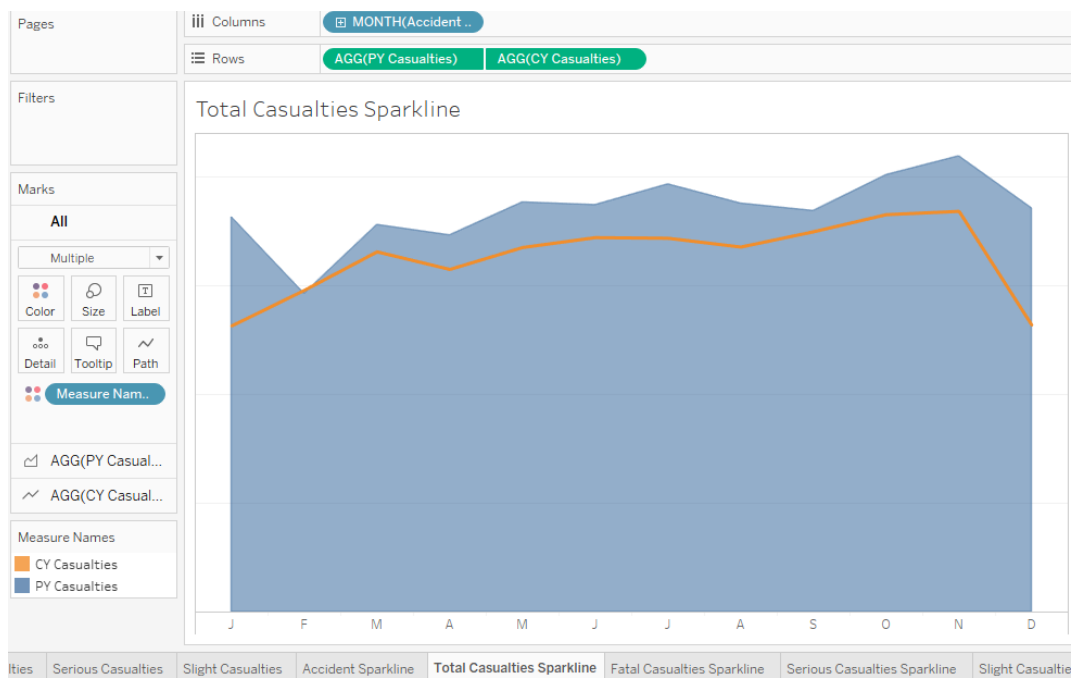
$$\frac{([CY \text{ Slight Casualties}] - [PY \text{ Slight Casualties}])}{[PY \text{ Slight Casualties}]}$$

2. Next, we develop the sparklines.

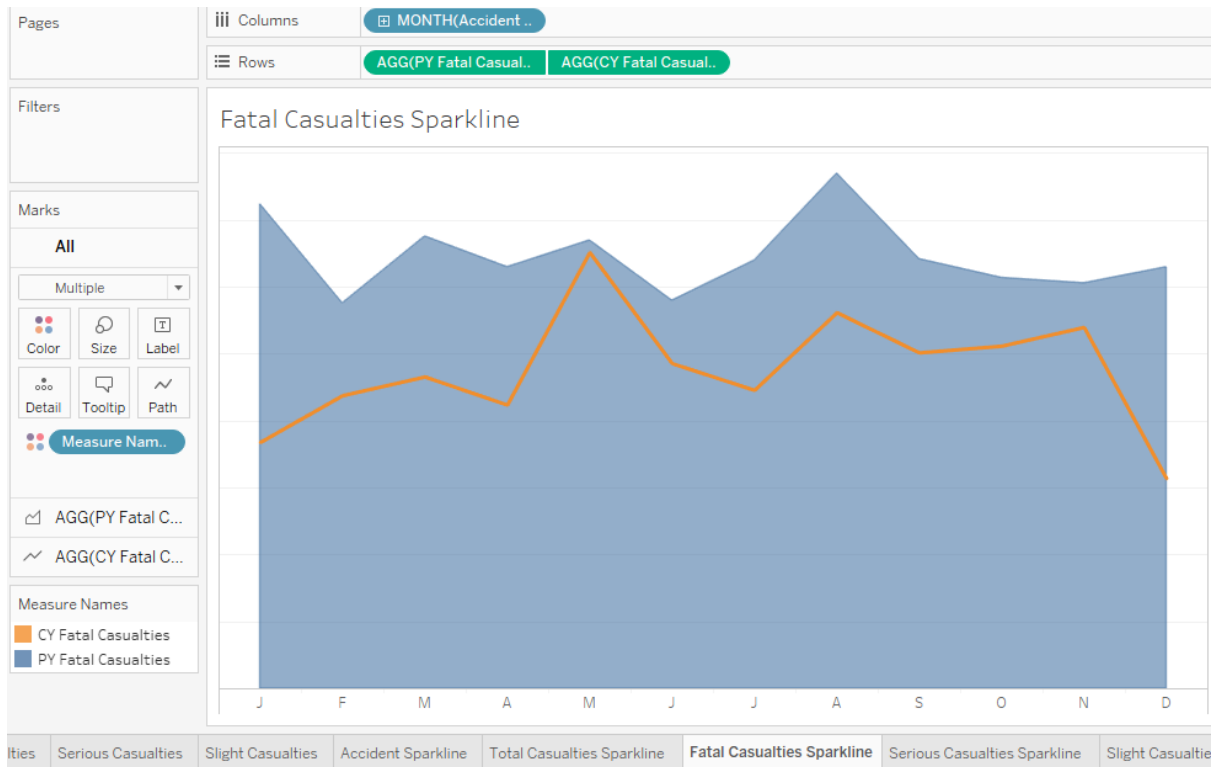
- **Accident Sparkline**



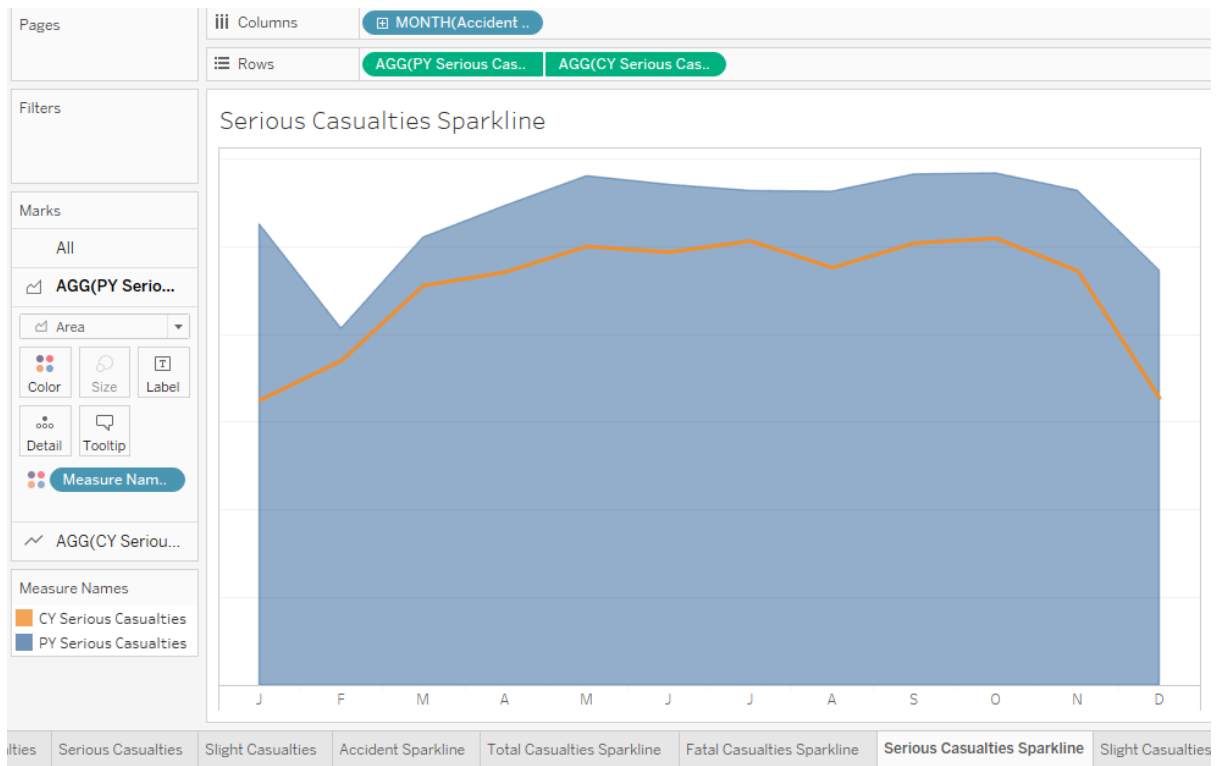
- **Total Casualties Sparkline**



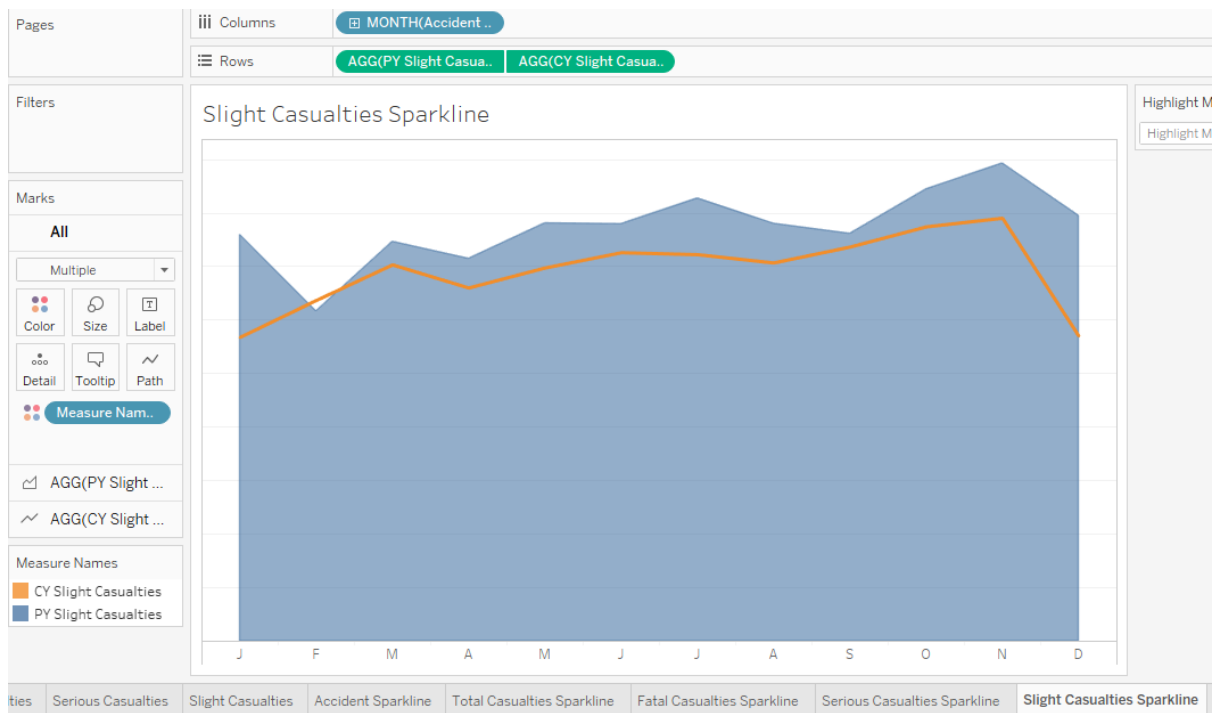
- **Fatal Casualties Sparkline**



- **Serious Casualties Sparkline**



- ***Slight Casualties Sparkline***



- ***Accident Severity Filter Calculation***

Accident Severity Filter

```
[Select Accident Severity]=[Accident Severity]
or [Select Accident Severity]="All"
```

If accident severity is selected, it will filter that particular accident severity. If you select "All" then it will select all types of severity instead of choosing one value.