

# ROAD ACCIDENT ANALYSIS

#### **ABSTRACT**

The road analysis dataset was examined using SQL, revealing insights into accident trends. It included the extraction of monthly casualty totals for the years providing valuable information for safety assessments and decision-making.

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#### **Road Accident Report SQL Queries**

#### **Total Casualities**

SELECT SUM(number\_of\_casualties) AS Total\_Casualities FROM accident.road\_accident;



#### **Fatal Casualities**

SELECT SUM(number\_of\_casualties) AS Fatal\_Casualities FROM accident.road\_accident

WHERE accident\_severity = 'Fatal'



# Percentage of total Fatal Casualities

select CAST(CAST(SUM(number\_of\_casualties) AS DECI-MAL(10,2)) \* 100 / (Select CAST(SUM(number\_of\_casualties) AS DECIMAL(10,2)) FROM accident.road\_accident) as decimal (10,2)) AS POTFC

#### FROM accident.road\_accident

WHERE accident\_severity = 'Fatal'



#### **Serious Casualities**

select SUM(number\_of\_casualties) AS Serious\_Casualities FROM accident.road\_accident

WHERE accident\_severity = 'Serious'

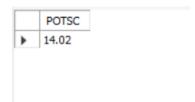


### Percentage of total Serious Casualities

Select CAST(CAST(SUM(number\_of\_casualties) AS DECI-MAL(10,2)) \* 100 / (Select CAST(SUM(number\_of\_casualties) AS DECIMAL(10,2)) FROM accident.road\_accident) as decimal (10,2)) AS POTSC

FROM accident.road\_accident

WHERE accident\_severity = 'Serious'



# **Slight Casualities**

select SUM(number\_of\_casualties) AS Slight\_Casualities FROM accident.road\_accident

WHERE accident\_severity = 'Slight'

	Slight_Casualities
<b>&gt;</b>	160447

# Percentage of total Slight Casualities

select CAST(CAST(SUM(number\_of\_casualties) AS DECI-MAL(10,2)) \* 100 / (Select CAST(SUM(number\_of\_casualties) AS DECIMAL(10,2)) FROM accident.road\_accident) as decimal (10,2)) AS POTSC

FROM accident.road\_accident

WHERE accident\_severity = 'Slight'

	POTSC
•	84.11

#### Total Casualities by the type of vehicles

**SELECT** 

CASE WHEN vehicle\_type IN ("Car", "Taxi/Private hire car")
THEN 'Cars'

WHEN vehicle\_type IN ("Agricultural Vehicle") Then "Agricultural"

WHEN vehicle\_type IN ("Motorcycle over 500cc", "Motorcycle 125cc and under", "Motorcycle 50cc and under", "Pedal cycle", 'Motorcycle over 125cc and up to 500cc') THEN "Bike"

WHEN vehicle\_type IN ("Van / Goods 3.5 tonnes mgw or under", "Goods over 3.5t. and under 7.5t", "Goods 7.5 tonnes mgw and over") THEN "Van"

WHEN vehicle\_type IN ('Minibus (8 - 16 passenger seats)' ,'Bus or coach (17 or more pass seats)' ) THEN "Bus"

**ELSE 'Others'** 

END AS vehicle\_group , sum(number\_of\_casualties)

FROM accident.road\_accident

**GROUP BY vehicle group;** 

	vehicle_group	sum(number_of_casualties)
•	Cars	153422
	Bike	15601
	Van	15037
	Bus	4738
	Others	1465
	Agricultural	502

### CY and PY Casualities by Month

Select Month(accident\_date) as Month\_Name, SUM(number\_of\_casualties) as CY\_Casualities

FROM accident.road\_accident
where Year(accident\_date) = 2022
group by Month(accident\_date)

	Month_Name	CY_Casualties
1	February	14804
2	June	17230
3	August	16796
4	April	15767
5	May	16775
6	December	13200
7	January	13163
8	September	17500
9	October	18287
10	July	17201
11	November	18439
12	March	16575

# Py Casualities by Month

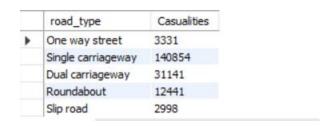
Select Month(accident\_date) as Month\_Name, SUM(number\_of\_casualties) as PY\_Casualities

FROM accident.road\_accident
where Year(accident\_date) = 2021
group by Month(accident\_date)



# Casualities by Road\_Type

select road\_type , sum(number\_of\_casualties) as Casualities FROM accident.road\_accident group by road\_type;



# Casualities by Road\_Surface

select

#### case

when road\_surface\_conditions in ('Dry') THEN 'Dry'

when road\_surface\_conditions in ('Wet or damp','Flood over 3cm. deep') THEN "Wet"

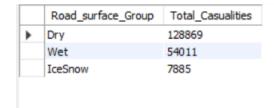
when road\_surface\_conditions in ('Snow' ,'Frost or ice')
THEN 'Ice\Snow'

**ELSE 'Default'** 

END AS Road\_surface\_Group , sum(number\_of\_casualties) as Total\_Casualities

FROM accident.road\_accident

group by Road\_surface\_Group;



# Casualities by Area

select urban\_or\_rural\_area as Area, sum(number\_of\_casualties) as Total\_Casualities, CAST(sum(number\_of\_casualties) as DECIMAL(10,2))\*100/ (select CAST(sum(number\_of\_casualties) as decimal(10,2)) FROM accident.road\_accident) as Total\_Casualities\_Percent

FROM accident.road\_accident

group by Area;

	Area	Total_Casualities	Total_Casualities_Percent
•	Urban	119964	62.885749
	Rural	70801	37.114251

### Casualities by Light\_Conditions

```
case

when light_conditions in ('Daylight') then "Day"

when light_conditions in ('Darkness - lights lit','Darkness - lighting unknown', 'Darkness - lights unlit', 'Darkness - no lighting') then "Dark"

END as Light_Conditions,

sum(number_of_casualties) as Total_Casualities,

CAST(sum(number_of_casualties) as DECIMAL(10,2))*100/
(select CAST(sum(number_of_casualties) as decimal(10,2))

FROM accident.road_accident) as Total_Casualities_Percent

FROM accident.road_accident

group by case

when light_conditions in ('Daylight') then "Day"
```

when light\_conditions in ('Darkness - lights lit','Darkness - lighting unknown', 'Darkness - lights unlit', 'Darkness - no lighting') then "Dark"

#### END;

	Light_Conditions	Total_Casualities	Total_Casualities_Percent
•	Day	137284	71.964983
	Dark	53481	28.035017