I. Basic Drill Down, Roll Up

- Total fatalities in Ottawa over the four years.
- Drilled down, yearly. *(Right)*
- Drilled down, monthly.
- Accidents during Icy conditions in December 2015. *(Below)*

```
1  SELECT H."Year", Count(*)
2  FROM "AccidentFact" AF, "Hour" H
3  WHERE AF."Hour_key" = H."Hour_key" AND AF."Is_Fatal"='yes'
4  GROUP BY H."Year"
5  ORDER BY H."Year"
```

Data Output | Explain | Messages | Notifications | Query History

	Year integer	count bigint
1	2013	24
2	2014	31
3	2015	21
4	2016	27
5	2017	28

```
2  SELECT H."Year", H."Month", COUNT(*)
3  FROM "AccidentFact" AF, "Accident" AC, "Hour" H, "Weather" W
4  WHERE AF."Accident_key" = AC."Accident_key" AND AF."Hour_key" = H."Hour_key" AND AF."Weather_key" = W."Weather_key"
5  AND (AC."Road_surface" = 'Ice' OR W."Visibility" LIKE '%Ice%') AND H."Year" = 2015 AND H."Month" = 12
```

Data Output | Explain | Messages | Notifications | Query History

	Year integer	Month integer	count bigint
1	2015	12	49

II. Drill Down, Roll Up, Slice And Dice

- Total/fatal accidents on weekends v. week days.

- Total number of accidents on holidays v. non-holidays.

```
1  SELECT AF."Is_Intersection", COUNT(*)
2  FROM "AccidentFact" AF
3  GROUP BY AF."Is_Intersection";
```

Data Output | Explain | Messages | Notifications | Query

	Is_Intersection text	count bigint
1	no	40613
2	yes	36562

```
1  SELECT H."Day_of_week", COUNT(*)
2  FROM "AccidentFact" AF, "Hour" H
3  WHERE AF."Hour_key" = H."Hour_key"
4      AND (H."Day_of_week" = 'Monday' OR H."Day_of_week" = 'Friday')
5      AND AF."Is_Fatal"='yes'
6  GROUP BY H."Day_of_week"
```

Data Output | Explain | Messages | Notifications | Query History

	Day_of_week text	count bigint
1	Friday	24
2	Monday	15

- **Dice** total/fatal accidents on Mondays compared to Fridays.

```
1  SELECT AF."Is_Intersection", COUNT(*)
2  FROM "AccidentFact" AF
3  WHERE AF."Is_Fatal"='yes'
4  GROUP BY AF."Is_Intersection";
```

Data Output | Explain | Messages | Notifications | Query

	Is_Intersection text	count bigint
1	no	51
2	yes	80

- Total/fatal accidents at intersections

III. Interplay Between Conditions And Accidents

```sql
SELECT AC."Road_surface", COUNT(*)
FROM "AccidentFact" AF, "Accident" AC
WHERE AF."Accident_key" = AC."Accident_key"
GROUP BY AC."Road_surface"
ORDER BY COUNT DESC
```

Data Output | Explain | Messages | Notifications | Query History

	Road_surface text	count bigint
1	Dry	52019
2	Wet	13184
3	Loose snow	4711
4	Ice	3209
5	Slush	2080
6	Packed snow	1737

- Interplay between road surface and number of accidents.

```sql
SELECT AC."Impact_type", COUNT(*)
FROM "AccidentFact" AF, "Accident" AC, "Weather" W
WHERE AF."Accident_key" = AC."Accident_key" AND AF."Weather_key" = W."Weather_key"
AND W."Temp">20
GROUP BY AC."Impact_type"
ORDER BY COUNT DESC
```

Data Output | Explain | Messages | Notifications | Query History

	Impact_type text	count bigint
1	Rear end	6899
2	Sideswipe	2659
3	Angle	2564
4	Turning move...	2167
5	SMV other	1910
6	SMV unattend...	1125
7	Other	444
8	Approaching	141

- Interplay between warm temperatures and types of accidents.

IV. Accident “Hot Spots”

- Most accident prone intersections in Autumn.
- Most accident prone intersections at dusk.

```sql
SELECT L."Location_key", L."Street_name/Highway",
    L."Intersection_1/Offramp_1", L."Intersection_2/Offramp_2", COUNT(*)
FROM "AccidentFact" AF, "Location" L
WHERE AF."Location_key" = L."Location_key"
GROUP BY L."Location_key"
HAVING COUNT(*) >= 100
ORDER BY COUNT DESC
```

Data Output | Explain | Messages | Notifications | Query History

	Location_key integer	Street_name/Highway text	Intersection_1/Offramp_1 text	Intersection_2/Offramp_2 text	count bigint
1	131	ST. JOSEPH BLVD	JEANNE D'ARC BLVD	[null]	325
2	819	HUNT CLUB RD	RIVERSIDE DR	[null]	244
3	480	PRINCE OF WALES DR	WEST HUNT CLUB RD	[null]	192
4	161	WEST HUNT CLUB RD	WOODROFFE AVE	[null]	190
5	70	BASELINE RD	WOODROFFE AVE	[null]	176

- Top accident prone intersections overall in four years.

```sql
SELECT L."Location_key", L."Street_name/Highway",
    L."Intersection_1/Offramp_1", L."Intersection_2/Offramp_2", COUNT(*)
FROM "AccidentFact" AF, "Location" L, "Accident" AC
WHERE AF."Location_key" = L."Location_key" AND AF."Accident_key" = AC."Accident_key"
    AND (L."Street_name/Highway" LIKE '%HIGHWAY%' OR L."Street_name/Highway" LIKE '%HWY%')
    AND AC."Visibility" != 'Daylight'
GROUP BY L."Location_key"
HAVING COUNT(*) >= 10
ORDER BY COUNT DESC
```

Data Output | Explain | Messages | Notifications | Query History

	Location_key integer	Street_name/Highway text	Intersection_1/Offramp_1 text	Intersection_2/Offramp_2 text	count bigint
1	5491	HIGHWAY 417	HWY 417 ANDERSON IC104R61	HWY 417 BOUNDARY IC96R16	53
2	5521	HIGHWAY 417	HWY417 IC118 RAMP67	HWY417 IC117 RAMP36	49
3	5552	HIGHWAY 417	HWY417 IC126 RAMP61	HWY417 IC124 RAMP76	45
4	5523	HIGHWAY 417	HWY417 IC118 RAMP57	HWY417 IC118 RAMP35	42
5	5514	HIGHWAY 417	HWY417 IC138 RAMP61	HWY417 IC134 RAMP36	41

- Highway sections with highest accident count in Autumn/with poor visibility
- Highway sections with highest accident count.
- Highway sections with highest accident count in Autumn.
- Highway sections with highest accident count during poor visibility