# SQL Queries for Toyota car reviews

1. List counting number of negative reviews by car models

```
1 •   SELECT model, Count(*) AS Number_of_reviews FROM cleaned_data
2     group by model
3     Order by Number_of_reviews desc;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: A

model	Number_of_reviews
Camry	515
Tacoma	348
RAV4	321
Corolla	321
Highlander	272

2. What are the prevalent reasons for negative reviews?

```
1     -- What are the prevalent reasons for those negative reviews?
2 •   Select complaint_reason, Count(*) As Num_appearance From full_data
3     Group by complaint_reason
4     Order by Num_appearance Desc;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: A

complaint_reason	Num_appearance
Air Conditioning and Heating	2309
Interior Quality	1085
Warranty or Service Complaints	1027
Fuel Economy Complaints	937
Exterior Quality	722
Engine Issues	685
Tire and Wheel Issues	634
Transmission Problems	624

3. Which car models have the most heavily criticized reviews (rating <2)?

```sql
1    -- 3. Which car models have the most heavily criticized reviews (rating <2)?
2 •  Select car_model, Count(*) As Num_appearance From full_data
3    Where Rating < 2
4    Group by car_model
5    Order by Num_appearance Desc;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

car_model	Num_appearance
Camry	212
Tacoma	184
RAV4	135
Sienna	129
Corolla	126
Highlander	124
Prius	62

4. Which specific car models have the most heavily criticized reviews (rating <2)?

```sql
1    -- 4. Which specific car models have the most heavily criticized reviews (rating <2)?
2 •  Select Vehicle_Title, Count(*) As Num_appearance From full_data
3    Where Rating < 2
4    Group by Vehicle_Title
5    Order by Num_appearance Desc;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Vehicle_Title	Num_appearance
2011 Toyota Venza Wagon 4dr Wagon AWD (3.5L 6cyl 6A)	17
2015 Toyota Highlander SUV Limited Platinum 4dr SUV AWD...	16
2016 Toyota Camry Sedan SE 4dr Sedan (2.5L 4cyl 6A)	16
2008 Toyota Camry Sedan LE 4dr Sedan (2.4L 4cyl 5A)	15
2012 Toyota Camry Sedan LE 4dr Sedan (2.5L 4cyl 6A)	15
2017 Toyota Corolla Sedan SE 4dr Sedan (1.8L 4cyl CVT)	14
2017 Toyota Tacoma Double Cab Limited 4dr Double Cab 5...	11
2010 Toyota Corolla Sedan LE 4dr Sedan (1.8L 4cyl 4A)	11

5. What are the reasons for criticism of the 2011 Toyota Venza?

```
1      -- 5. What are the reasons for criticism of the 2011 Toyota Venza Wagon 4dr Wagon AWD (3.5L 6cyl 6A)?
2 ●    Select complaint_reason, count(*) As Num_appearance
3      From full_data
4      Where Vehicle_Title = "2011 Toyota Venza Wagon 4dr Wagon AWD (3.5L 6cyl 6A)"
5      Group by complaint_reason
6      Order by num_appearance desc;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: IA

complaint_reason	Num_appearance
Electrical System	7
Air Conditioning and Heating	5
Interior Quality	4
Warranty or Service Complaints	4
Transmission Problems	4
Fuel System	4
Fuel Economy Complaints	4
Engine Issues	2

6. Which body types receive negative reviews?

```
1      -- Which body types receive negative reviews?
2 ●    Select model, Count(*) As Num_appearance From cleaned_data
3      Where Rating < 2
4      Group by model
5      Order by Num_appearance Desc;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: IA

model	Num_appearance
Camry	62
Tacoma	51
RAV4	40
Corolla	40
Sienna	33
Highlander	30
Tundra	19
Avalon	17

7. What are the reasons that make the rating the most criticized and most annoying (rating < 1.5)?

```
1     -- What are the reasons that make the rating the most criticized and most annoying (rating < 1.5)?
2 •   Select complaint_reason, count(*) As Num_appearance
3     From full_data
4     Where Rating < 1.5
5     Group by complaint_reason
6     Order by num_appearance Desc;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: $\overline{I}A$

complaint_reason	Num_appearance
Air Conditioning and Heating	178
Warranty or Service Complaints	95
Interior Quality	70
Engine Issues	59
Transmission Problems	55
Exterior Quality	54
Pricing/Cost Complaints	50
Fuel Economy Complaints	48

8. Numbers of doors and negative reviews relation?

```
1     -- Numbers of doors and negative reviews relation?
2 •   Select num_doors As Number_of_doors, Count(*) As Num_appearance From cleaned_data
3     Group by num_doors
4     Order by Num_appearance Desc;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: $\overline{I}A$

Number_of_doors	Num_appearance
4	2857
2	219
3	9

9. Each year of Toyota cars, how likely is it to receive bad criticism?

```
1      -- Number of complaints via years
2 ●    Select year_made As Year_made, Count(*) As Num_appearance From cleaned_data
3      Group by year_made
4      Order by Year_made Desc;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: IA

Year_made	Num_appearance
2018	112
2017	167
2016	182
2015	130
2014	96
2013	119
2012	124
2011	149
2010	172

Result Grid | Filter Rows: | Export: | Wrap Cell Content: IA

Year_made	Num_appearance
2010	172
2009	212
2008	225
2007	266
2006	190
2005	161
2004	141
2003	152
2002	136

10. Tacoma vs Camry?

```
1       -- List complaint reasons for Tacoma
2  •    Select complaint_reason, count(*) as num_appearance
3       from full_data
4       where car_model = "Tacoma"
5       group by complaint_reason order by num_appearance desc;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

complaint_reason	num_appearance
Transmission Problems	145
Fuel Economy Complaints	104
Warranty or Service Complaints	102
Interior Quality	97
Engine Issues	90
Exterior Quality	88
Steering Problems	56

```
1       -- List complaint reasons for Camry
2  •    Select complaint_reason, count(*) as num_appearance
3       From full_data
4       Where car_model = "Camry"
5       Group by complaint_reason Order by num_appearance Desc;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

complaint_reason	num_appearance
Fuel Economy Complaints	150
Engine Issues	118
Transmission Problems	118
Exterior Quality	115
Tire and Wheel Issues	104
Pricing/Cost Complaints	82
Braking System	75

Takeaways:

- ➢ **Each car model has different prevalent complaints. For example: the Camry has a lot of complaints about interior quality, waranty and service complaints while the Tacoma has the most complaints about Transmission and Fuel Economy, AC & Heating.**
- ➢ **Warranty, service, and interior are the main factors causing frustration for customers.**
- ➢ **Each year, each car model has different major issues.**
- ➢ **The more popular a car is, the more likely it is to receive negative reviews.**