

## **Car Rentals in Washington State-Allanation Analysis**

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It is about analyzing the trends of car rentals in Washington. What do people prefer in rental cars, how price is influenced by features, and how location plays an important role in car rental demand.

This project attempted to answer questions such as:

### **1. What are the most common features in rental cars?**

When renting a vehicle, one encounters various features, including Bluetooth, GPS, and all-wheel drive (AWD). Interestingly, this analysis reveals which features are most widely incorporated into rentals in the course of car rentals in Washington State.

Most Common Features:

Bluetooth

Automatic Transmission

Air Conditioning

Cruise Control

USB Input

Less Common Features:

Built-in GPS

Heated Seats

AWD (All-Wheel Drive)

Sunroof

Electric Engine

In more mountainous areas like Leavenworth and Snoqualmie Pass, you are more likely to find people owning AWD and snow tires. In cities, such as Seattle, renting smaller fuel-efficient cars is more common than renting larger ones.

### **2. What attracts customers the most when renting a car?**

This question concerned the booking frequency of various categories with comparative features that may be termed as popular.

#### Key Findings:

Most rented types of cars are SUVs and sedans.

People prefer high fuel economy.

Most popular place for airport pickup is Seattle-Tacoma Airport.

Electric and hybrid cars minimize carbon emissions and increasingly popular in cities.

AWD rentals, particularly in winter months, increase pervasively in snow area. Summer season convertibles and larger family cars, such as minivans, are generally in demand for road trips.

3. What features influence most on the rental price? I have also made a simple regression model to check which features influence the cost of daily renting.

Features that increase price but not just:

Luxury brand (BMW, Tesla)

Electric/hybrid engine

AWD or 4x4

Younger model year

Pick up from a remote or tourist-heavy location

Features that bring down price:

Older cars

Manual transmission

Limited mileage rentals

On average, electric vehicles (EVs) are about \$20–30 more expensive per day, and luxury cars can cost up to \$100 more per day than basic sedans.

4. How does pickup location alter the rental price?

I also calculated around how far each rental's pickup location is to the major places of Seattle, Spokane, and national parks. Then I checked the effect of distance to the rental price.

What I found:

Cars rented from Seattle-Tacoma Airport (SEA) are usually more expensive.

Renting in tourist areas (i.e., almost near Mt. Rainier or Olympic National Park) costs more, too.

Generally, the rentals are cheaper the farther they are from bigger cities-unless they're a well-known tourist spot.

For every extra 10 mile distance from a major city, average prices drop around \$5-10 unless its a high demand or seasonal area.

#### Conclusion

It is a project that taught me how data can be used in helping understand consumer preferences and pricing with regard to the car rental market. If at all one thinks of renting a car in Washington, picking the

Sources: <https://des.wa.gov/services/fleet-vehicles-parking/reserving-or-renting-vehicle>

<https://www.enterprise.com/en/road-trips/planning/things-to-consider-when-renting-a-car-for-a-road-trip.html>