Mini Project 2

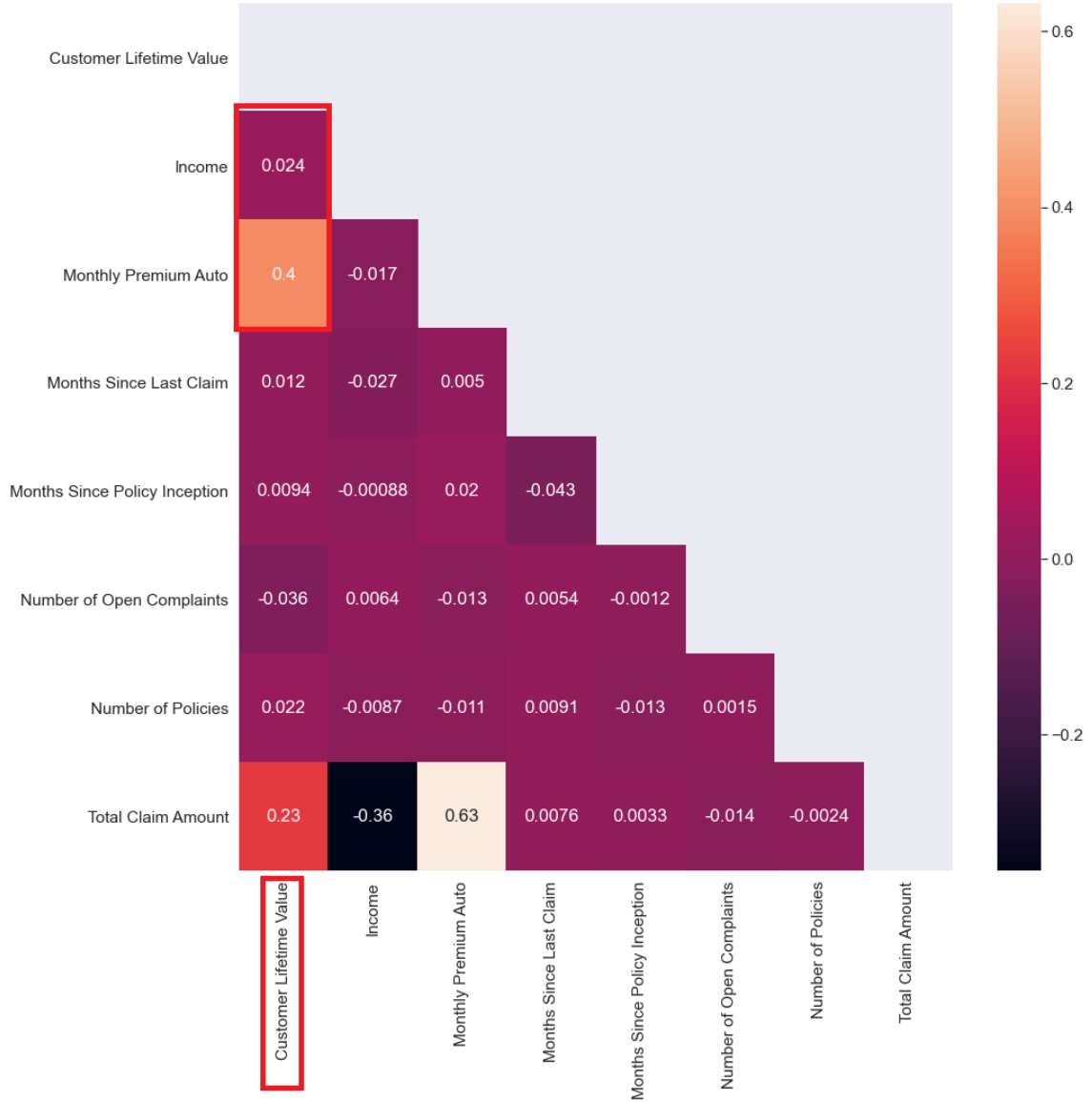
sklearn.linear_model.LinearRegression()

Scenario

- The client is the CEO of a car insurance company in the US.
- He wants to know how he can increase the profitability of the business.
- He has set aside limited sales and marketing budget and would like to know how to maximize the chances of increasing the company’s revenue.
- He as given you some data and requests that you draw some insight from it.

Problem statements

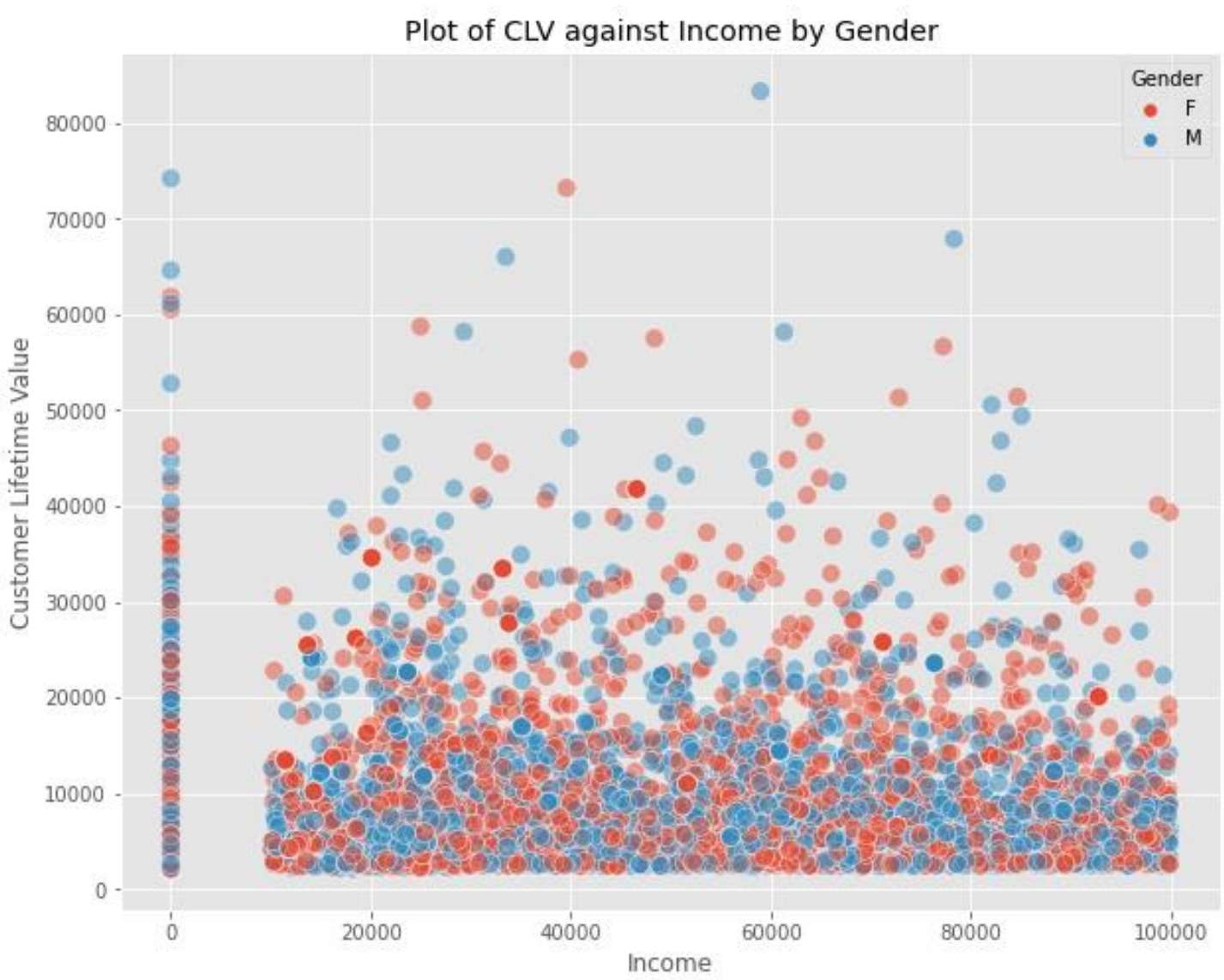
- What is the profile of our most valuable customers?
- On average, what is the customer lifetime value (CLV) of our most valuable customers?
- Given a profile of a new customer, can we predict their CLV?



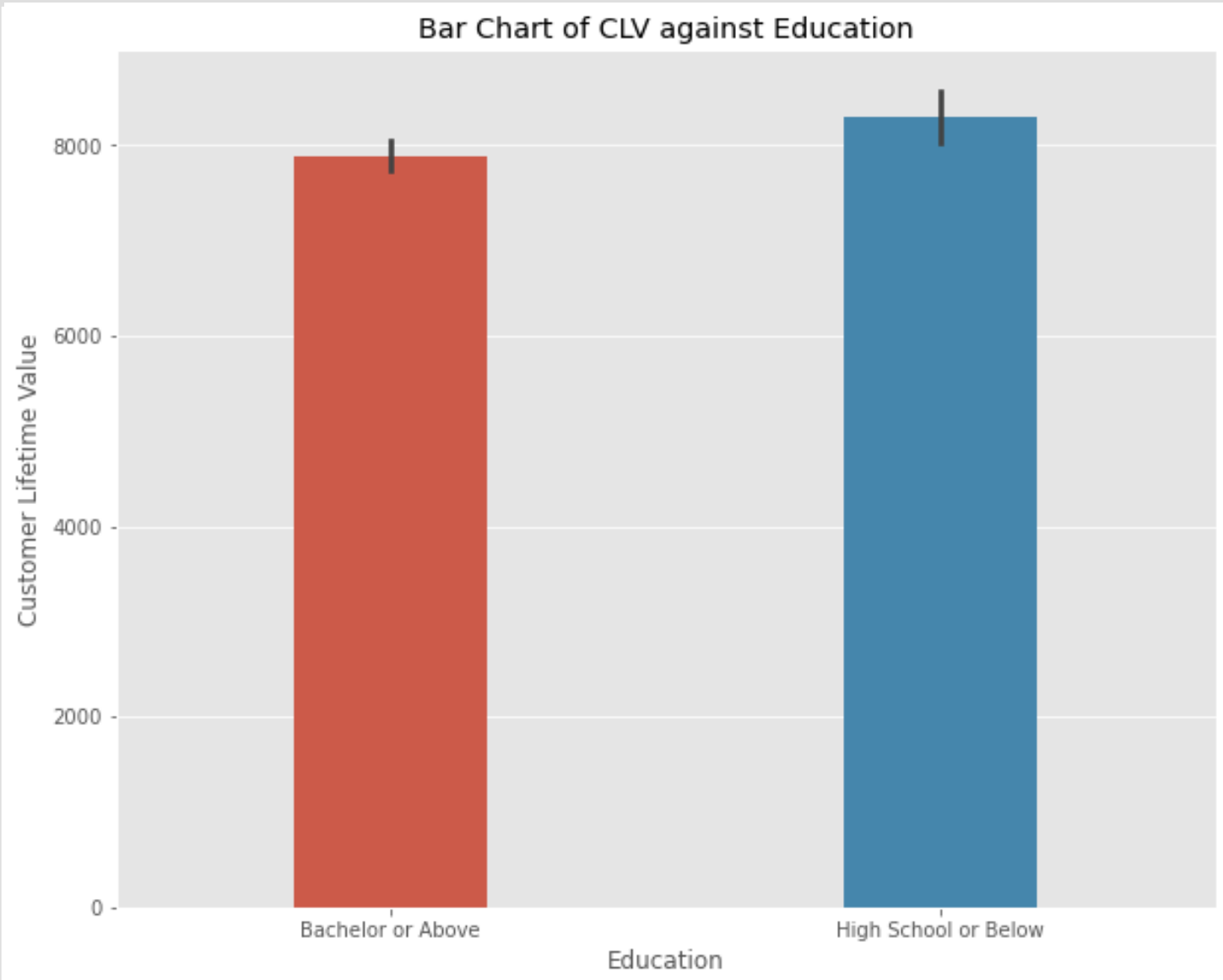
Correlated: Monthly Premium Auto

Not correlated: Income

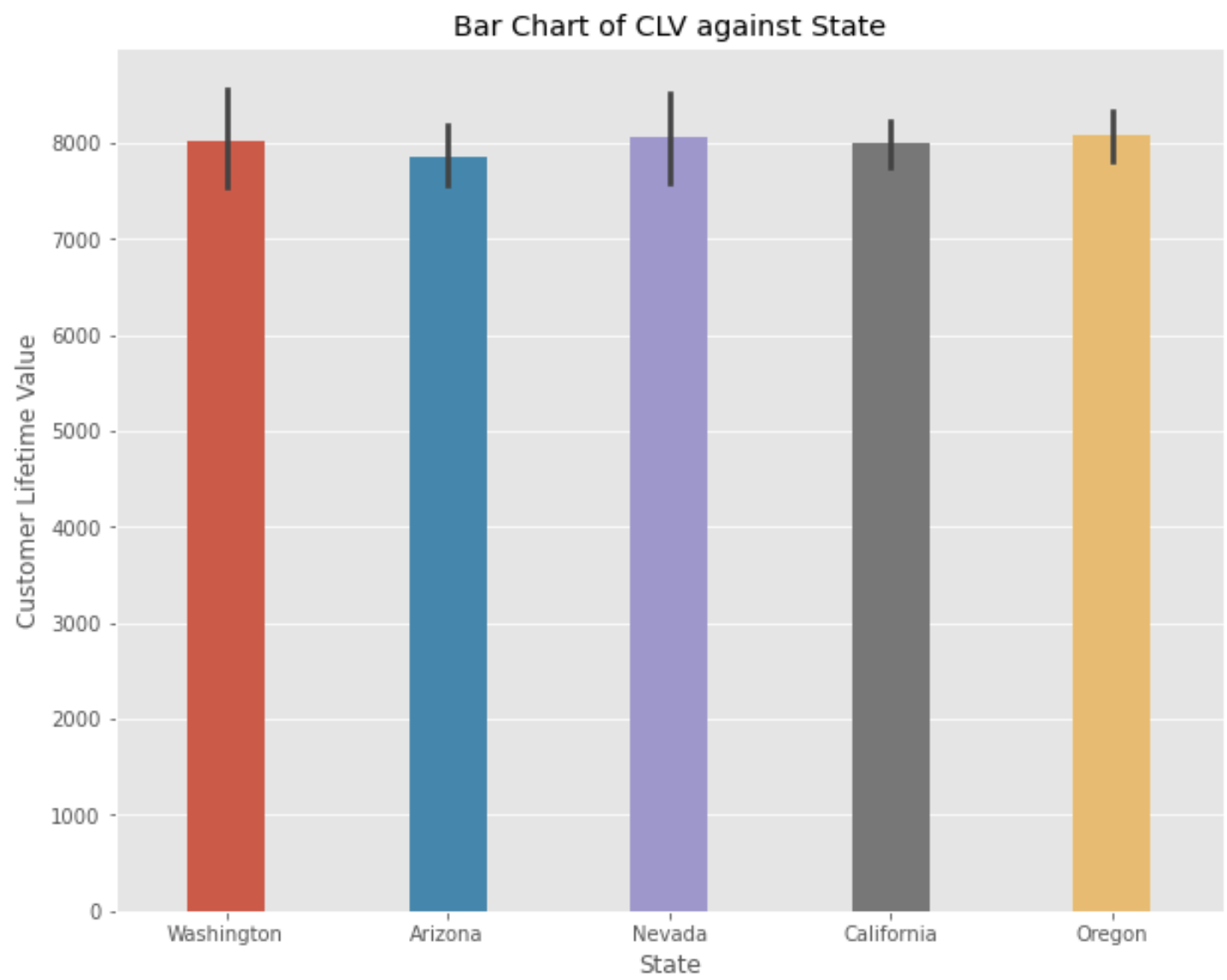
The goal is to profile the customer before we know their purchase.



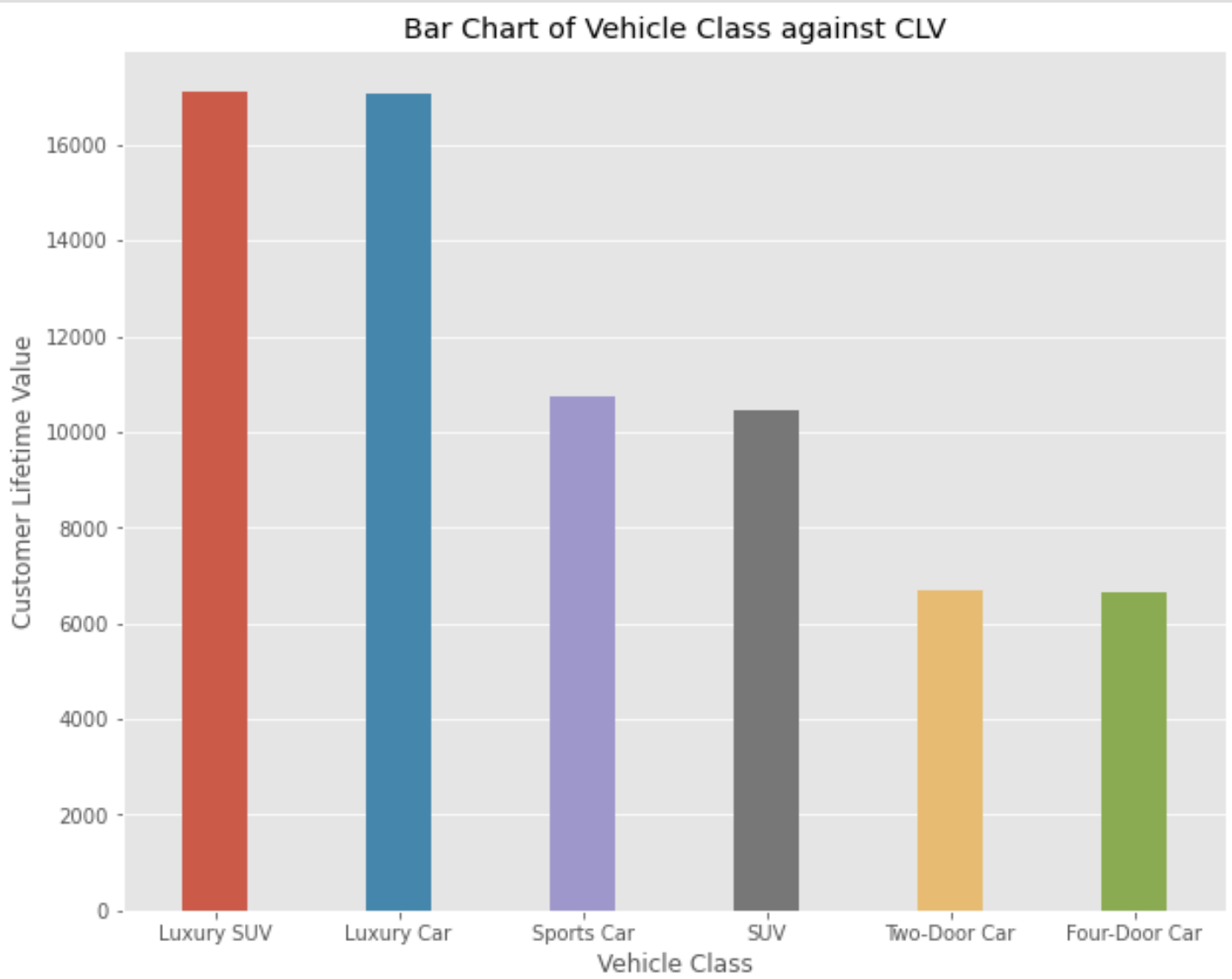
There isn’t a clear separation by Gender and Income



There isn’t a clear separation by Education Status



There isn’t a clear separation by state.



Luxury car owners have higher CLV

Can we profile of our high value customers?

(yes, with the help of machine learning)

	Non Zero Coefficient Weights
Oregon	-85.53
F	115.96
M	-0.00
Divorced	273.17
Single	-279.86
Four-Door Car	-3673.23
Luxury Car	6429.53
Luxury SUV	6028.08
Two-Door Car	-3498.06
Education	-337.33
Vehicle Size	-183.23

- We want to target a divorced lady who is not from Oregon, without a university degree and owns a small luxury car.
- Her CLV would be: $17,558
- The median CLV is $5,780

Suggested business actions

- Launch marketing campaigns to target single moms.
- Hire more sales staff who specialize who can more easily build relationships with these type of customers.
- Explore partnership opportunities with support groups of single moms.