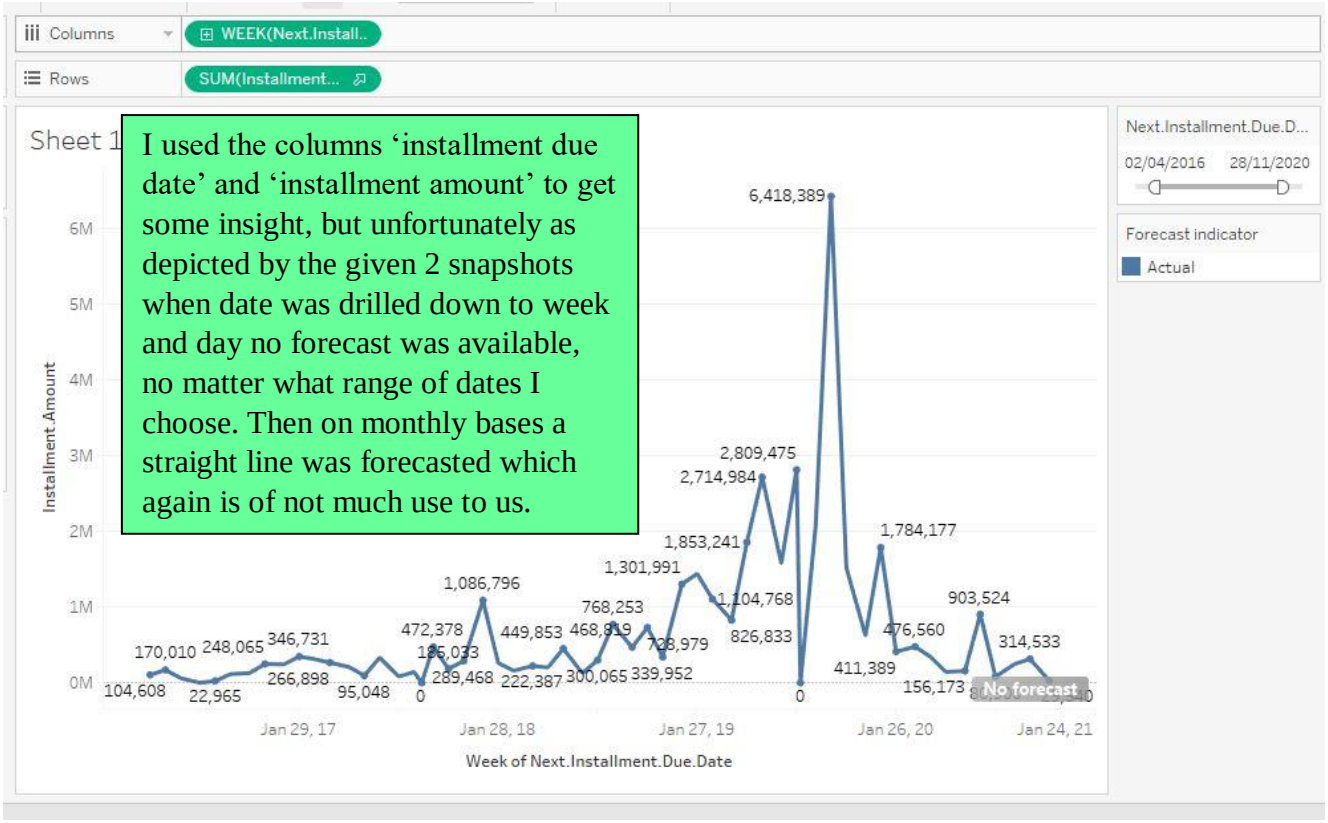
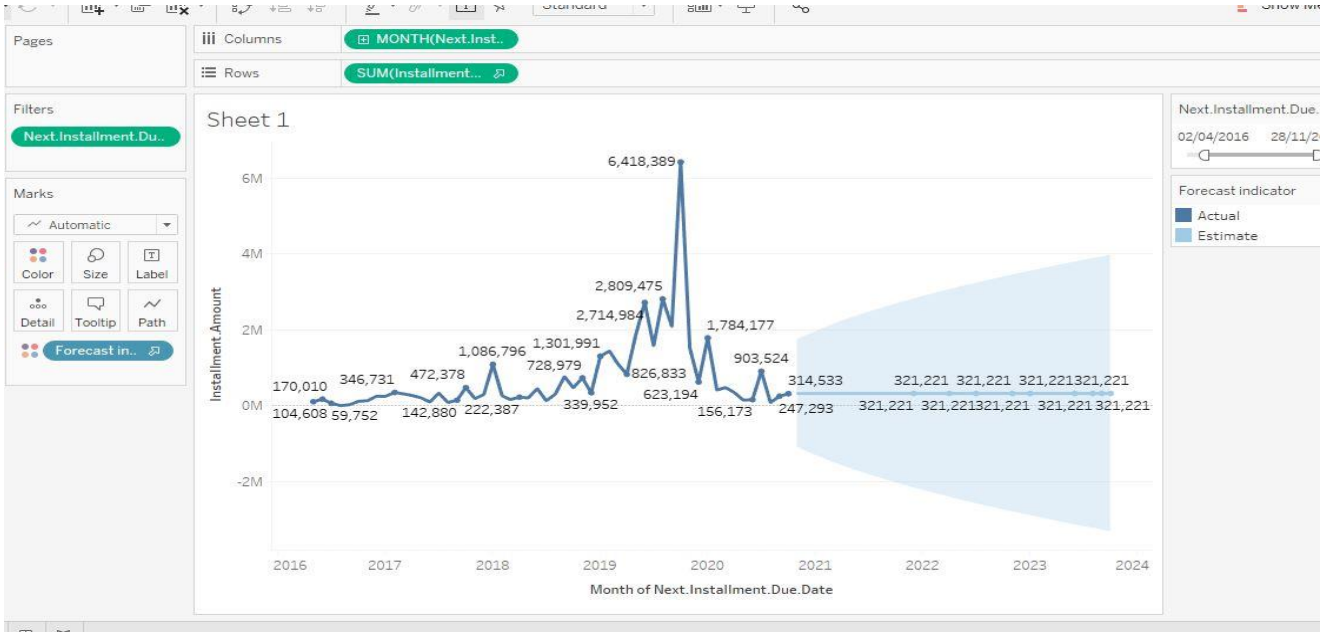
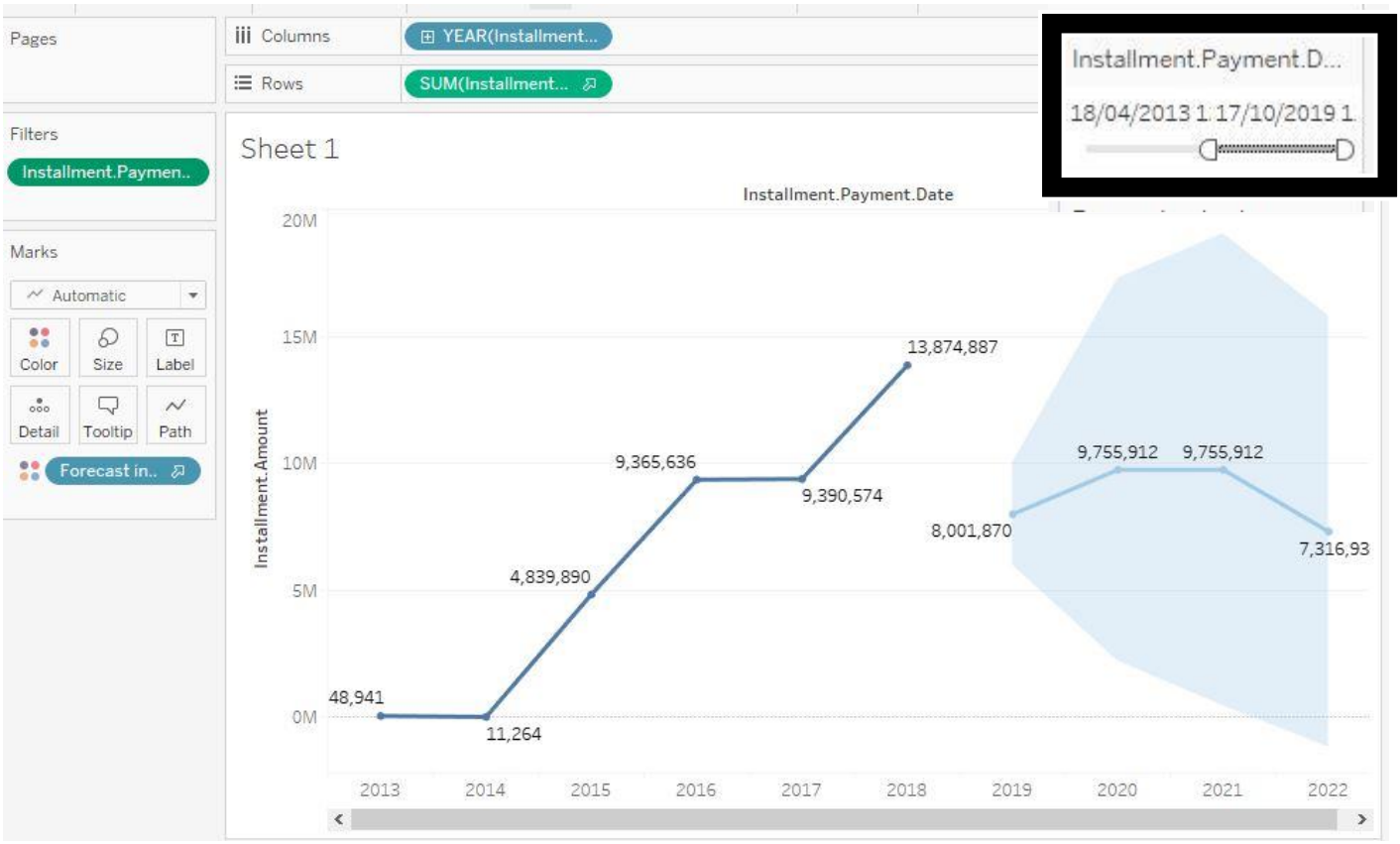
Assignment 14 - Forecasts and Clustering in Tableau

Hajra Abdul Hai – 14893

In the first task we had to forecast using the data given. So first I imported the 'insurance data' excel file in tableau, and then tied to do forecasting with different attributes and KPIs to see which gives the best result.

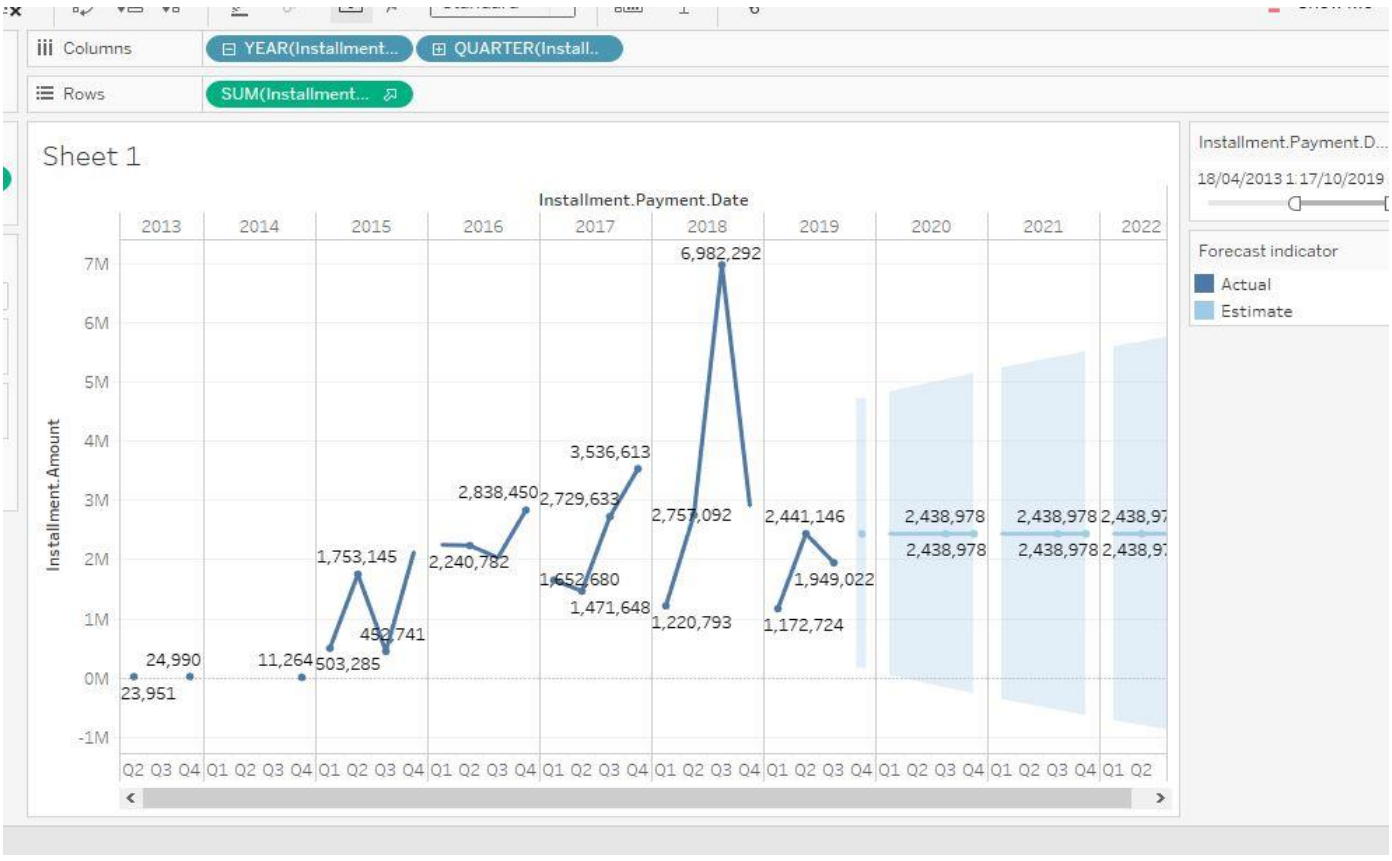


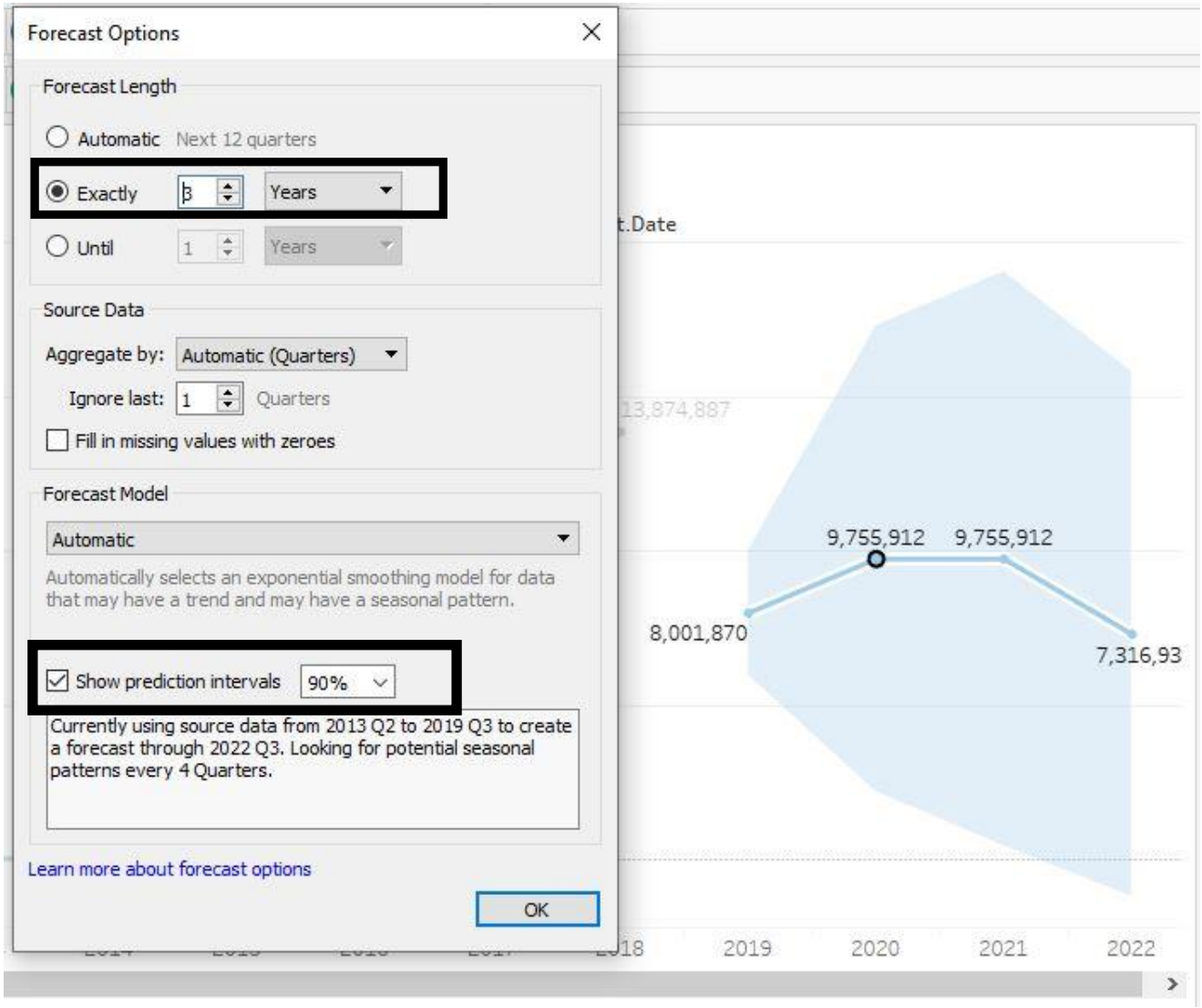




I then used the columns ‘installment payment date’ with the same KPI ‘installment amount’ and without any drilling down with filter of dates from 2013 onwards I did get a forecast, however the margin of error it gave was too much even though it was set to 90% (snapshot on the next page). Keeping that aside as soon as I drilled down into quarterly the forecast changed into a straight line irrespective of the range I choose on the filter.

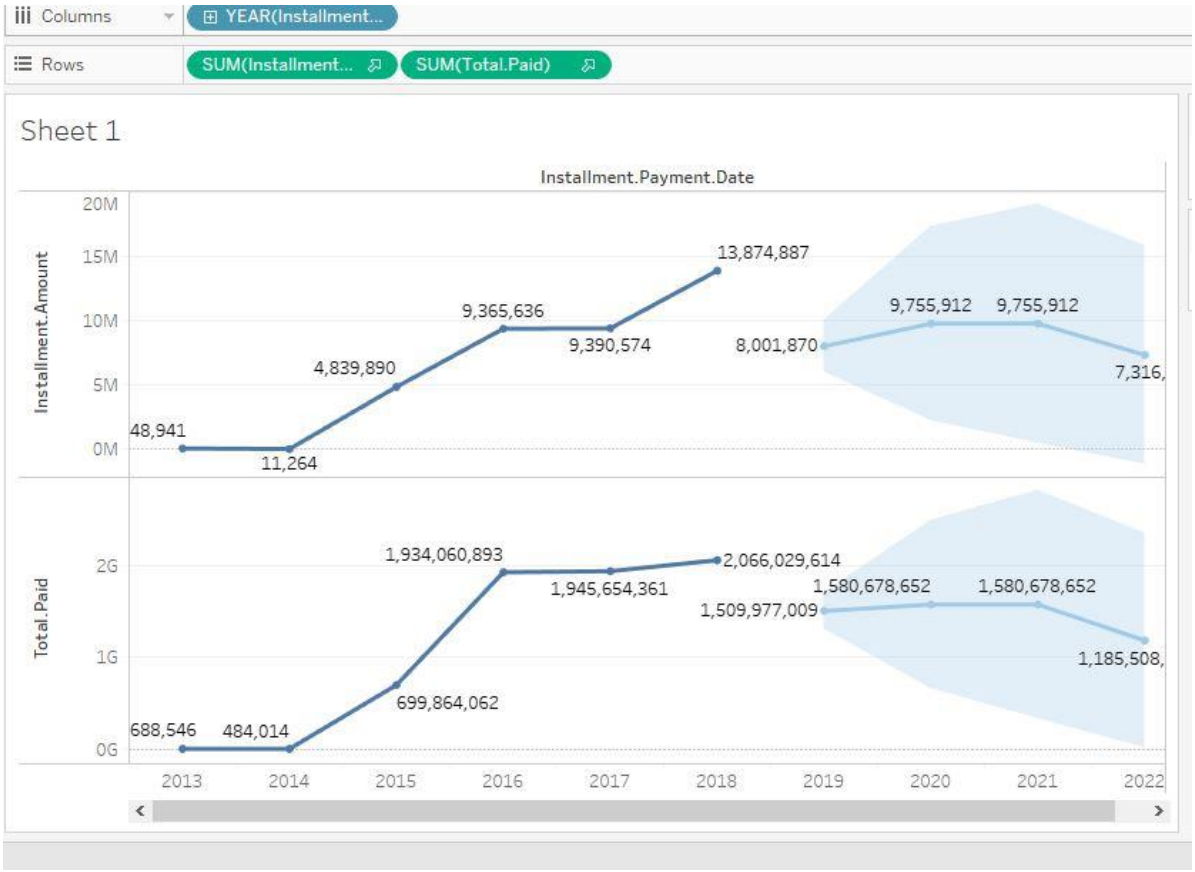
But still this was the best forecast I could extract from this dataset to my knowledge.





In the forecast options I changed the prediction interval to 90% to decrease the margin of error but it did not have much effect on the range.

I also changed the forecast length to 3 years because without that it was only predicting for only a year and with that, I could not figure out any pattern/seasonality.



Describe Forecast

Summary | Models

Options Used to Create Forecasts

Time series: Year of Installment.Payment.Date
Measures: Sum of Installment.Amount, Sum of Total.Paid
Forecast forward: 12 quarters (2019 Q4 – 2022 Q3)
Forecast based on: 2013 Q2 – 2019 Q3
Ignore last: 1 quarter (2019 Q4)
Seasonal pattern: None (Not enough data to search for a seasonal pattern recurring every 4 Quarters)

Sum of Installment.Amount

Initial 2019 Q4	Change From Initial 2019 Q4 – 2022 Q3	Seasonal Effect High	Seasonal Effect Low	Contribution Trend	Contribution Season	Quality
2,438,978 ± 93.4%	0.0%	None		0.0%	0.0%	Ok

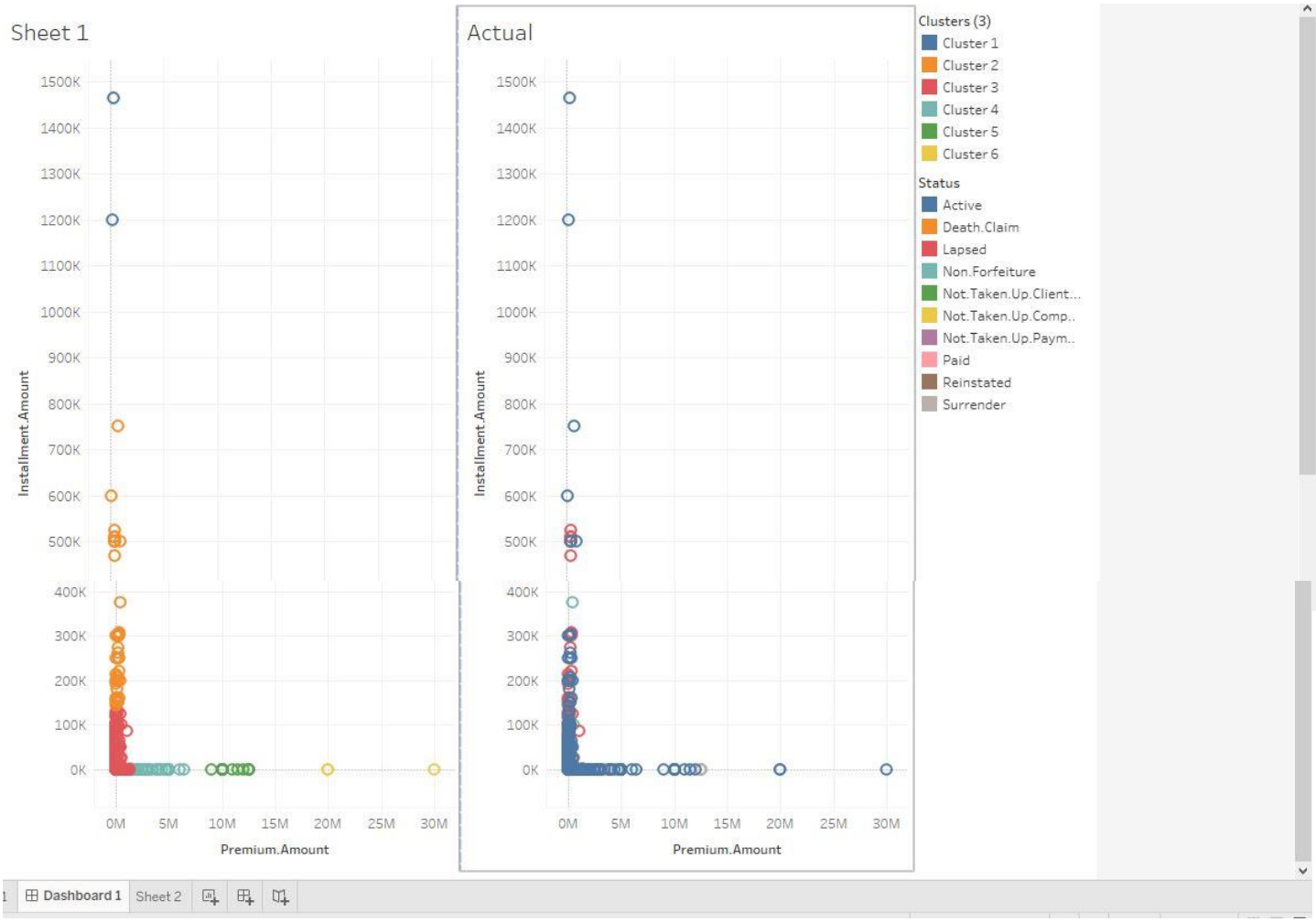
Sum of Total.Paid

Initial 2019 Q4	Change From Initial 2019 Q4 – 2022 Q3	Seasonal Effect High	Seasonal Effect Low	Contribution Trend	Contribution Season	Quality
395,169,663 ± 56.6%	0.0%	None		0.0%	0.0%	Poor

Copy to Clipboard Learn more about the forecast summary

Since column ‘installment payment date’ was giving the better forecast I stuck with it and added another graph for ‘total paid’ KPI and it came out to be almost similar to the other KPI. And for this column as well, when I drilled down into quarterly no forecast was given.

Then I described the forecast to see what insight it gave and according to its analysis quality for installment amount was OK while for paid total paid was POOR. Also, according to it due to lack of data it could not find any seasonal pattern.



Next, we had to perform clustering. I tried clustering with many different attributes but no trend/clusters seem to be made, until I selected ‘premium amount’ and ‘installment amount’.

This seemed to be a lot similar to clusters against ‘status’.