DSC5211C Session 2 – Workshop

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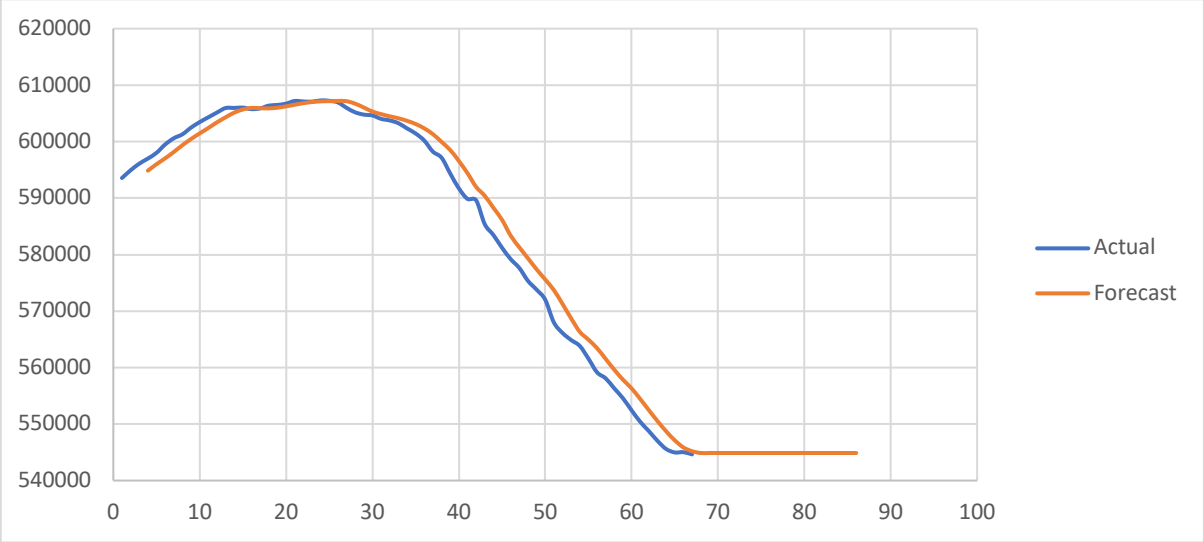
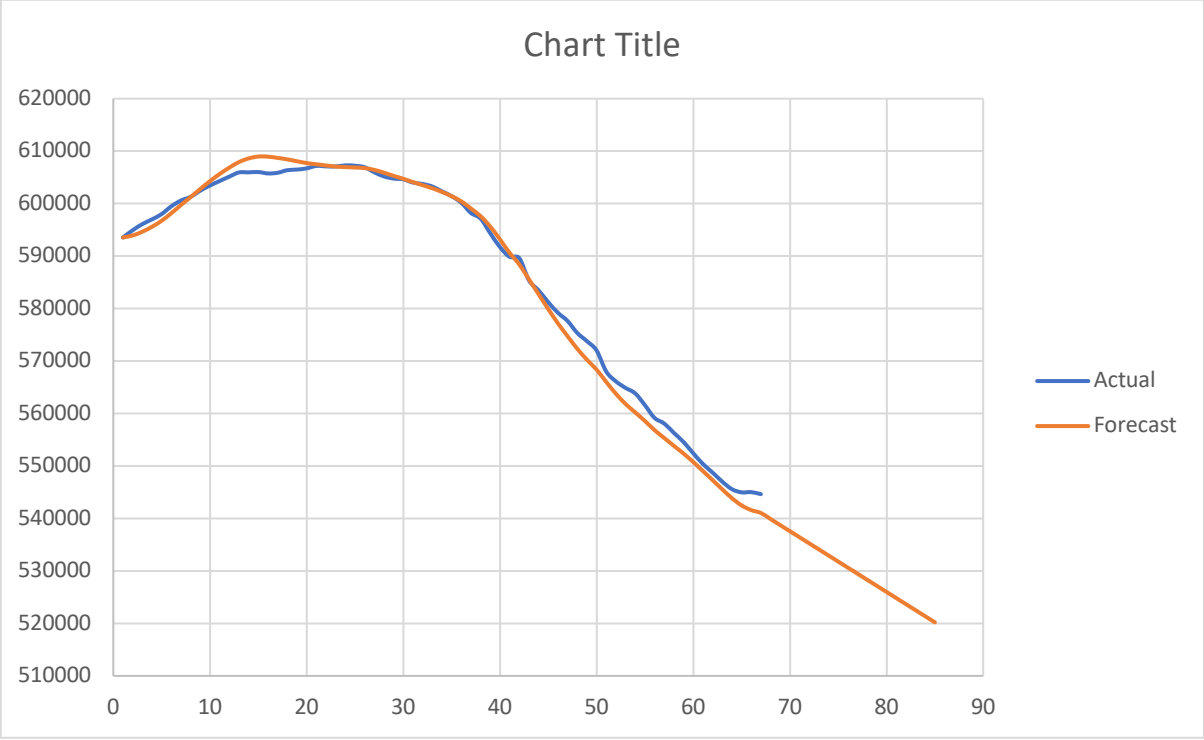
Model 1 Moving Average: 3 month



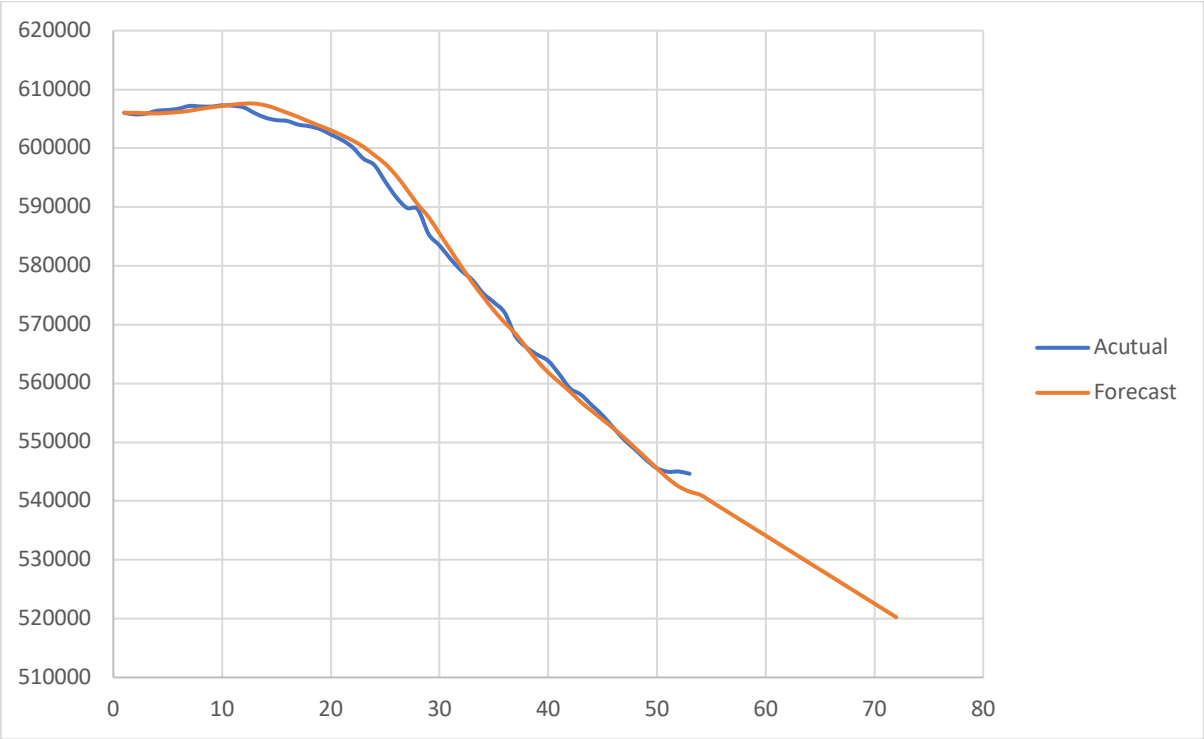
Model 2 Holt Exponential Smoothing (Full Data)

alpha = 0.2, gamma = 0.4

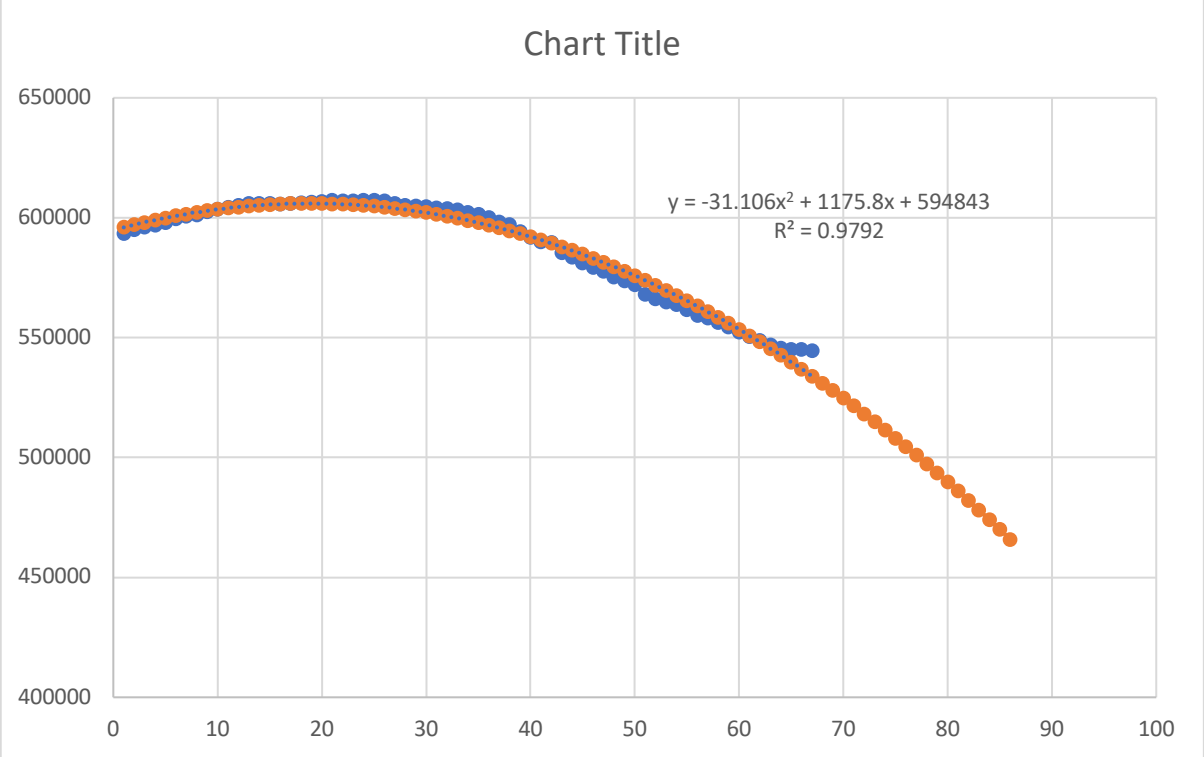


Model 3 Holt Exponential Smoothing (Partial Data since 2013 Feb)

alpha = 0.2, gamma = 0.4



Model 4 Polynomial Fitting



Error Measurement

	MAPE	MAD	MSD
Moving Average: 3 month	0.4034188	2331.09375	7918808.93
Holt Exponential Smoothing (Full dataset)	0.22383988	1316.33715	2749802.46
Holt Exponential Smoothing (Partial dataset)	0.15582072	907.122367	1683726.22
Polynomial Fitting	0.41303166	2386.00472	9308217.57

By comparing the error of 4 models, holt-exponential smoothing method gives the best forecasts. The forecasts yielded from this method closely follows the trend of the training data. Hence, the volume of cars drops dramatically outside the scope of the training data, which might not be a good estimation of future trend.

The Holt exponential smoothing method performs better on the partial dataset without transition of trends.