Emilia Romagna Grand Prix, 2021

Forecasting Sergio Perez's Next 5 Lap Times
Nathan Jones 2022

Name of Variable = time	
Period(s) of Differencing	1,1
Mean of Working Series	-0.64065
Standard Deviation	24.88827
Number of Observations	60
Observation(s) eliminated by differencing	2

Autocorrelation Check for White Noise									
To Lag	Chi-Square	DF	Pr > ChiSq	Autocorrelations					
6	29.36	6	<.0001	-0.611	0.184	-0.093	-0.013	0.176	-0.120
12	31.47	12	0.0017	-0.002	-0.074	0.135	-0.070	0.010	-0.017

Variance Estimate	619.8365
Std Error Estimate	24.89652
AIC	556.04
SBC	556.04
Number of Residuals	60

* AIC and SBC do not include log determinant.

Autocorrelation Check of Residuals									
To Lag	Chi-Square	DF	Pr > ChiSq	Autocorrelations					
6	29.32	6	<.0001	-0.611	0.184	-0.093	-0.013	0.175	-0.120
12	31.42	12	0.0017	-0.002	-0.074	0.134	-0.070	0.010	-0.017
18	31.63	18	0.0243	0.032	-0.023	0.007	0.009	-0.024	0.016
24	33.14	24	0.1012	-0.003	0.003	0.021	-0.084	0.086	0.018

Model for variable time	
Period(s) of Differencing	1,1

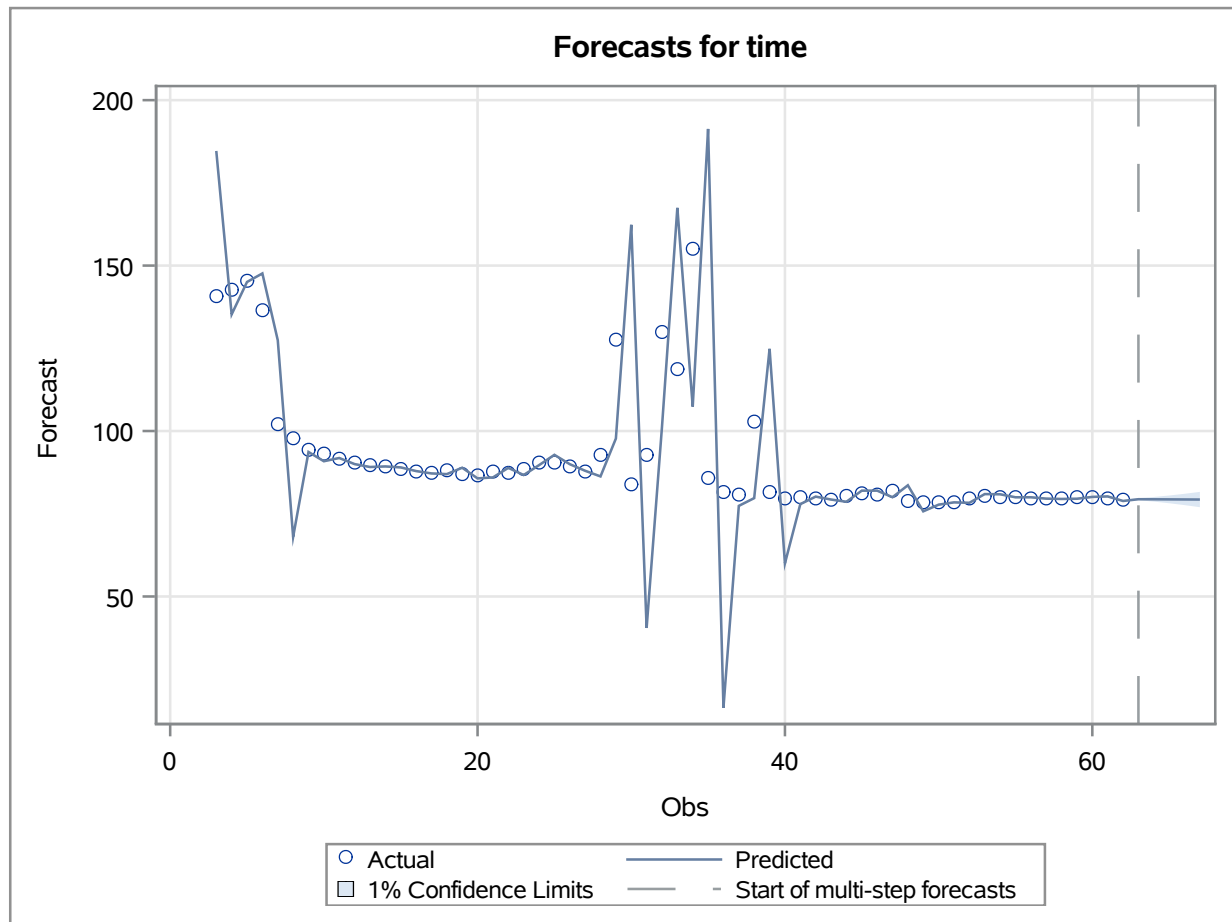**No mean term in this model.**

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			1% Confidence Limits	
	Forecasts for variable time			
Obs	**Forecast**	**Std Error**		
63	79.3930	24.8965	79.0810	79.7050
64	79.3670	55.6703	78.6693	80.0647
65	79.3410	93.1542	78.1735	80.5085
66	79.3150	136.3638	77.6059	81.0241
67	79.2890	184.6375	76.9749	81.6031

Forecasts for time

Legend:
- ○ Actual
- □ 1% Confidence Limits
- — Predicted
- - Start of multi-step forecasts

Outlier Detection Summary	
Maximum number searched	2
Number found	2
Significance used	0.05

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Outlier Details				
Obs	Type	Estimate	Chi-Square	Approx Prob>ChiSq
34	Additive	53.99617	4291.67	<.0001
29	Additive	39.76617	2327.70	<.0001