Emilia Romagna Grand Prix, 2021

Forecasting Daniel Riccardo's Next 5 Lap Times
Nathan Jones 2022

Name of Variable = time	
Period(s) of Differencing	1,1
Mean of Working Series	-0.50585
Standard Deviation	16.32283
Number of Observations	60
Observation(s) eliminated by differencing	2

Autocorrelation Check for White Noise									
To Lag	Chi-Square	DF	Pr > ChiSq	Autocorrelations					
6	30.82	6	<.0001	-0.495	0.071	-0.074	0.076	-0.216	0.402
12	37.66	12	0.0002	-0.300	0.057	0.015	-0.031	0.045	-0.026

Variance Estimate	266.6906
Std Error Estimate	16.33066
AIC	505.438
SBC	505.438
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	30.79	6	<.0001	-0.494	0.071	-0.074	0.076	-0.217	0.402
12	37.62	12	0.0002	-0.300	0.057	0.016	-0.031	0.045	-0.026
18	38.27	18	0.0036	0.004	-0.007	0.022	-0.039	0.057	-0.047
24	41.34	24	0.0153	0.018	0.034	-0.128	0.116	0.018	-0.019

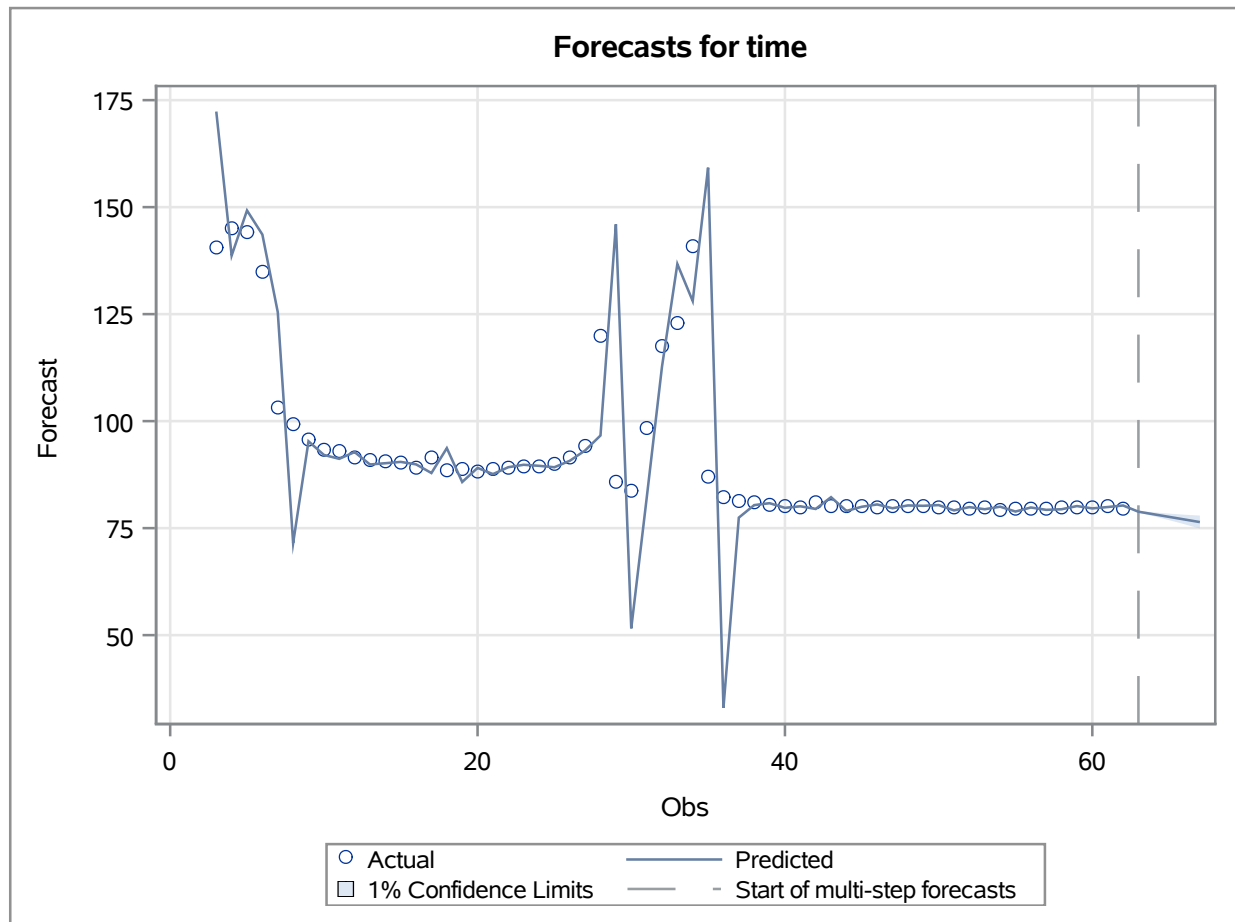| Model for variable time	
Period(s) of Differencing	1,1

No mean term in this model.

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			1% Confidence Limits	
Forecasts for variable time				
Obs	**Forecast**	**Std Error**		
63	78.8370	16.3307	78.6323	79.0417
64	78.2310	36.5165	77.7733	78.6887
65	77.6250	61.1037	76.8592	78.3908
66	77.0190	89.4467	75.8979	78.1401
67	76.4130	121.1114	74.8951	77.9309

Forecasts for time

Legend: Actual (○), 1% Confidence Limits (□), Predicted (line), Start of multi-step forecasts (dashed line)

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**
35	Shift	-60.71600	4629.10	<.0001
28	Additive	29.34067	3243.04	<.0001