

This is the title

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1 One

This is the srart of the passage.
The test is passed successfully.

2 Math part

This is the first math equation:

$$f(x) = \sum_{i=1}^n \epsilon_i$$

the second part

Dep. Variable:	meantemp	No. Observations:	1462
Model:	ARIMA(0, 1, 0)	Log Likelihood	-2823.091
Date:	Fri, 29 Nov 2024	AIC	5648.181
Time:	01:11:58	BIC	5653.468
Sample:	0	HQIC	5650.154
	- 1462		
Covariance Type:	opg		

	coef	std err	z	P> z	[0.025	0.975]
sigma2	2.7919	0.071	39.481	0.000	2.653	2.930
Ljung-Box (L1) (Q):		37.42	Jarque-Bera (JB):	369.07		
Prob(Q):		0.00	Prob(JB):	0.00		
Heteroskedasticity (H):		0.78	Skew:	-0.48		
Prob(H) (two-sided):		0.01	Kurtosis:	5.27		

Warnings:

[1] Covariance matrix calculated using the outer product of gradients (complex-step).

	Test	P-Value	Test Statistic
0	ADF Test	0.277412	-2.021069
1	KPSS Test	0.100000	0.187864
2	Unit Root Differences	NaN	1.000000
3	Seasonal Differences	NaN	1.000000

3 Appendix for tables

Table 1: Model Summary Table

.model	r_squared	adj_r_squared	sigma2	statistic	p_value	df	log_lik	AIC	AICc
linear_no_dummy	0.7934	0.7928	11.1880	1398.496	0	5	-3837.231	3537.485	3537.543
linear_dummy	0.8715	0.8709	6.9699	1409.162	0	8	-3489.786	2848.597	2848.720
mean	NA	NA	53.9946	NA	NA	NA	NA	NA	NA
naive	NA	NA	2.7938	NA	NA	NA	NA	NA	NA
snaive	NA	NA	8.9231	NA	NA	NA	NA	NA	NA
drift	NA	NA	2.7938	NA	NA	NA	NA	NA	NA

Table 2: Model Summary Table

.model	kpss_stat	kpss_pvalue	ndiffs	nsdiffs	bp_stat	bp_pvalue	lb_stat	lb_pvalue
drift	0.1668	0.1	0	0	37.3479	0.0000	37.4246	0.0000
linear_dummy	0.1640	0.1	0	0	688.8547	0.0000	690.2692	0.0000
linear_no_dummy	0.1899	0.1	0	0	473.1878	0.0000	474.1595	0.0000
naive	0.1668	0.1	0	0	37.3479	0.0000	37.4246	0.0000
sarima	0.1538	0.1	0	0	1.5492	0.2133	1.5524	0.2128
snaive	0.2894	0.1	0	0	672.6339	0.0000	674.0218	0.0000

Table 3: Model Summary Table

.model	term	estimate	std.error	statistic	p.value
linear_no_dumy	(Intercept)	700.3787	11.8561	59.0733	0.0000
linear_no_dumy	humidity	-0.1567	0.0058	-27.0830	0.0000
linear_no_dumy	wind_speed	-0.0409	0.0211	-1.9380	0.0528
linear_no_dumy	meanpressure	-0.6612	0.0118	-56.0071	0.0000
linear_no_dumy	time	0.0021	0.0002	10.3031	0.0000
linear_dumy	(Intercept)	419.8945	14.5850	28.7894	0.0000
linear_dumy	humidity	-0.1399	0.0056	-24.8596	0.0000
linear_dumy	wind_speed	-0.0106	0.0169	-0.6284	0.5298
linear_dumy	meanpressure	-0.3888	0.0144	-26.9365	0.0000
linear_dumy	time	0.0017	0.0002	10.1253	0.0000
linear_dumy	season_Autumn	5.9208	0.2251	26.3036	0.0000
linear_dumy	season_Spring	5.6261	0.2601	21.6269	0.0000
linear_dumy	season_Summer	8.2651	0.3086	26.7856	0.0000
drift	b	0.0000	0.0437	0.0000	1.0000
sarima_dumy	ar1	0.9898	0.0041	242.1087	0.0000
sarima_dumy	ma1	-0.0953	0.0298	-3.2015	0.0014
sarima_dumy	ma2	-0.1798	0.0300	-5.9982	0.0000
sarima_dumy	humidity	-0.1363	0.0042	-32.4098	0.0000
sarima_dumy	wind_speed	-0.0291	0.0072	-4.0637	0.0001
sarima_dumy	meanpressure	-0.0322	0.0076	-4.2461	0.0000
sarima_dumy	time	0.0021	0.0045	0.4730	0.6363
sarima_dumy	season_Autumn	0.2608	0.5227	0.4990	0.6179
sarima_dumy	season_Spring	0.5930	0.5235	1.1326	0.2576
sarima_dumy	season_Summer	0.4116	0.6098	0.6751	0.4997
sarima_dumy	intercept	63.9278	8.5701	7.4594	0.0000
sarima_no_dumy	ar1	0.9821	0.0054	180.2766	0.0000
sarima_no_dumy	ma1	-0.0234	0.0329	-0.7128	0.4761
sarima_no_dumy	humidity	-0.1355	0.0042	-32.3052	0.0000
sarima_no_dumy	wind_speed	-0.0305	0.0070	-4.3544	0.0000
sarima_no_dumy	meanpressure	-0.0321	0.0075	-4.2714	0.0000
sarima_no_dumy	time	-0.0001	0.0039	-0.0339	0.9730
sarima_no_dumy	intercept	66.1415	8.2258	8.0408	0.0000

Table 4: Model Summary Table

.model	RMSE	MAE	MPE	MAPE	MASE	RMSSE	ACF1
drift	13.3623	11.7644	50.0270	50.0270	NaN	NaN	0.9525
linear_dumy	3.6619	2.7407	-9.3986	13.7899	NaN	NaN	0.8673
linear_no_dumy	4.2402	3.5275	-17.8293	18.4615	NaN	NaN	0.7798
mean	7.3533	6.5861	-27.4088	36.5698	NaN	NaN	0.9525
naive	13.3623	11.7644	50.0270	50.0270	NaN	NaN	0.9525
sarima_dumy	3.0829	2.6184	-0.0790	12.4737	NaN	NaN	0.8543
sarima_no_dumy	3.1777	2.7123	-1.6050	13.1857	NaN	NaN	0.8641
snaive	9.5219	7.3749	24.3618	29.8995	NaN	NaN	0.8207