


Arecanut Price Analysis and Forecasting


1. Upload the Arecanut Price Data (Excel)

Upload Excel file



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data1.xlsx 9.7KB

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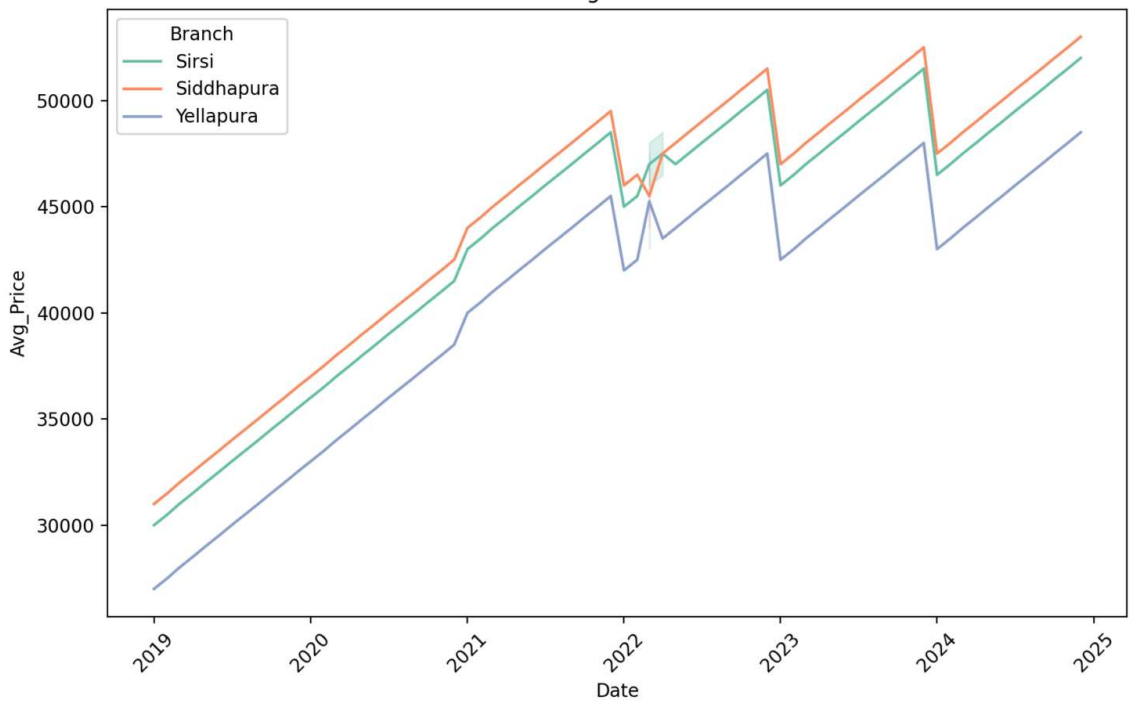
Dataset Overview:

	Date	Branch	Maxtrade_Price	Mintrade_Price	Avg_Price
0	2019-01-01 00:00:00	Sirsi	31,000	29,000	30,000
1	2019-01-01 00:00:00	Siddhapura	32,000	30,000	31,000
2	2019-01-01 00:00:00	Yellapura	28,000	26,000	27,000
3	2019-02-01 00:00:00	Sirsi	31,500	29,500	30,500
4	2019-02-01 00:00:00	Siddhapura	32,500	30,500	31,500
5	2019-02-01 00:00:00	Yellapura	28,500	26,500	27,500
6	2019-03-01 00:00:00	Sirsi	32,000	30,000	31,000
7	2019-03-01 00:00:00	Siddhapura	33,000	31,000	32,000
8	2019-03-01 00:00:00	Yellapura	29,000	27,000	28,000
9	2019-04-01 00:00:00	Sirsi	32,500	30,500	31,500

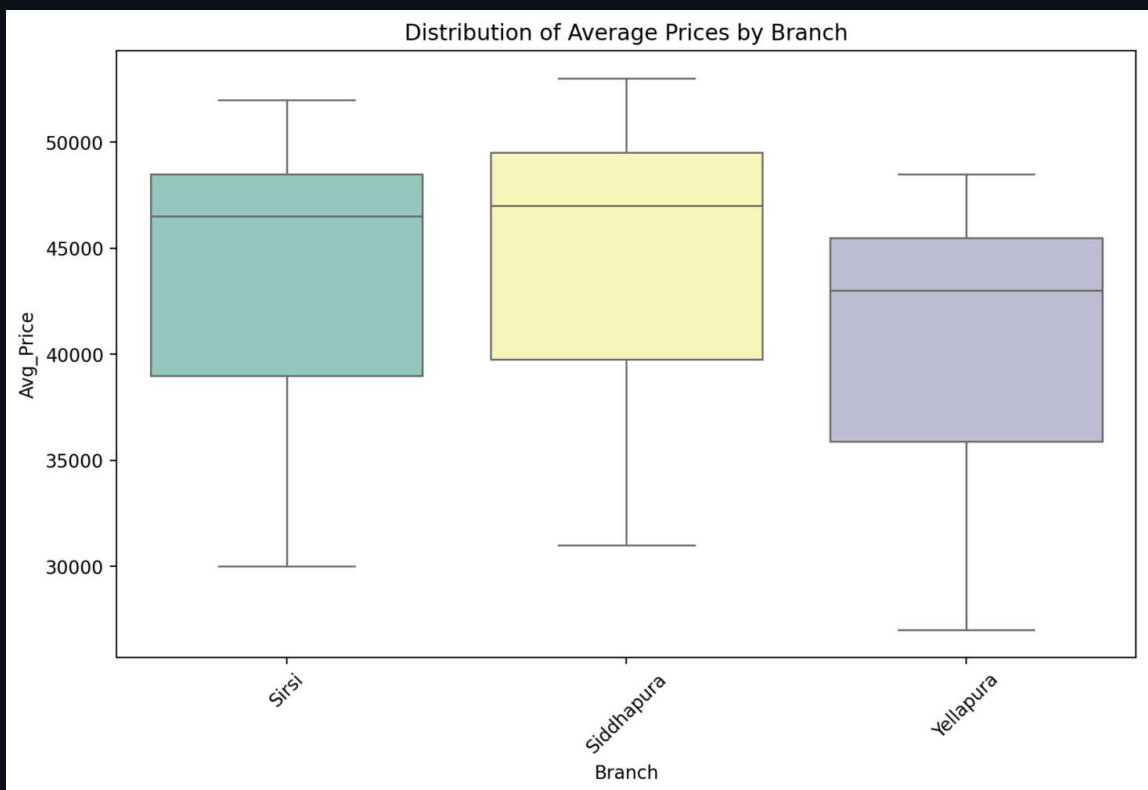
2. Data Visualization

Trend of Arecanut Average Prices Over Time

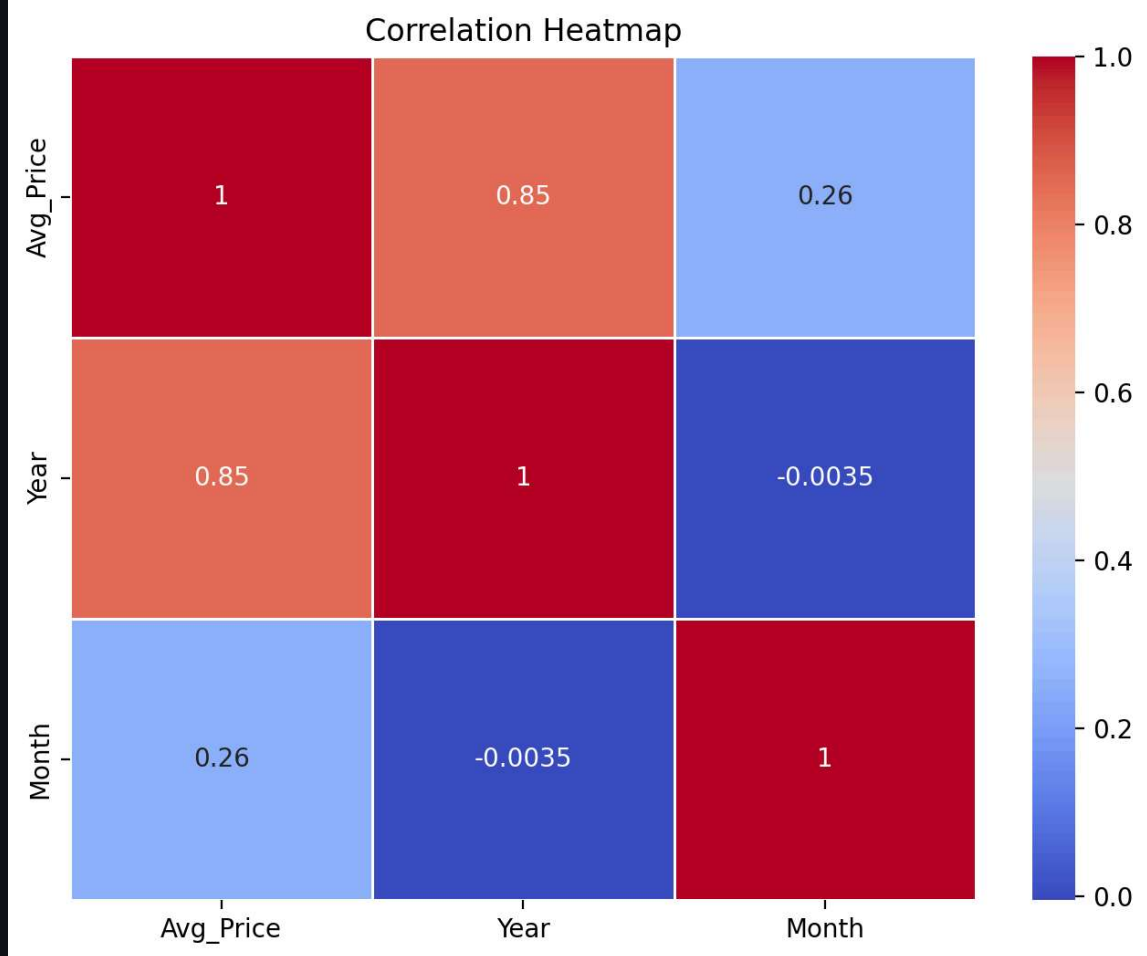
Trend of Average Prices Over Time



Distribution of Average Prices by Branch

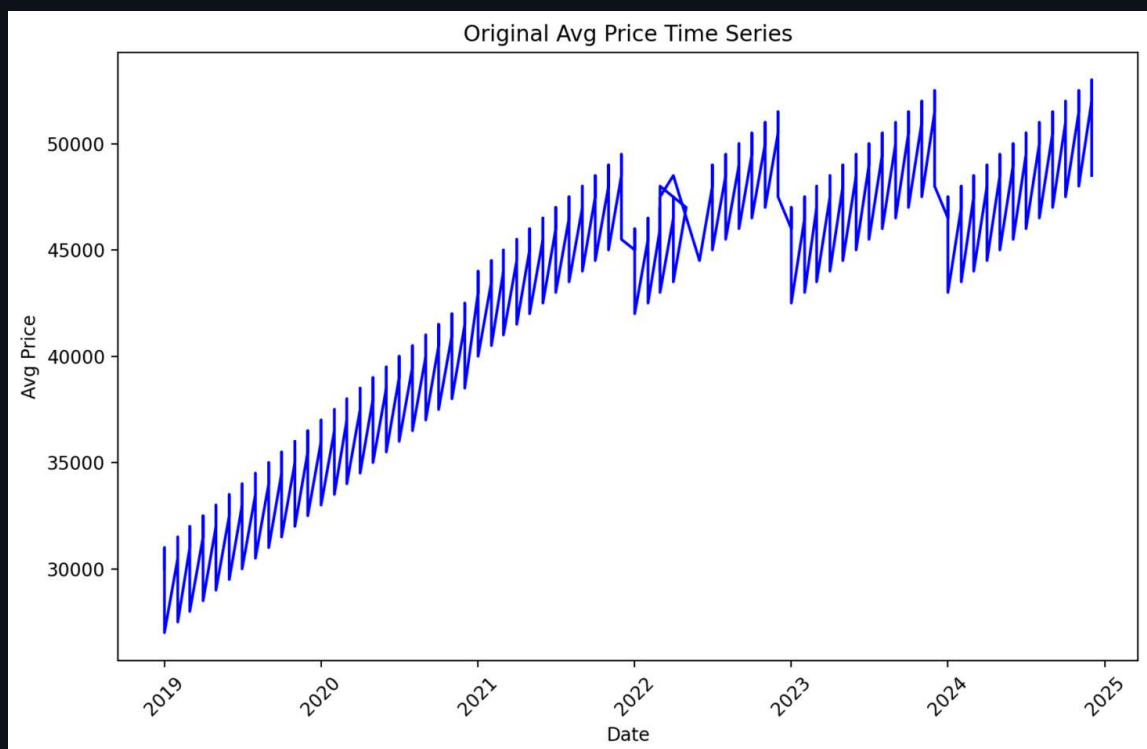


Correlation Heatmap of Numerical Features



ADF Test for Stationarity and Differencing

Original Avg Price Time Series (Before Differencing)



ADF Statistic: -1.9181578127539576

p-value: 0.3235679049678525

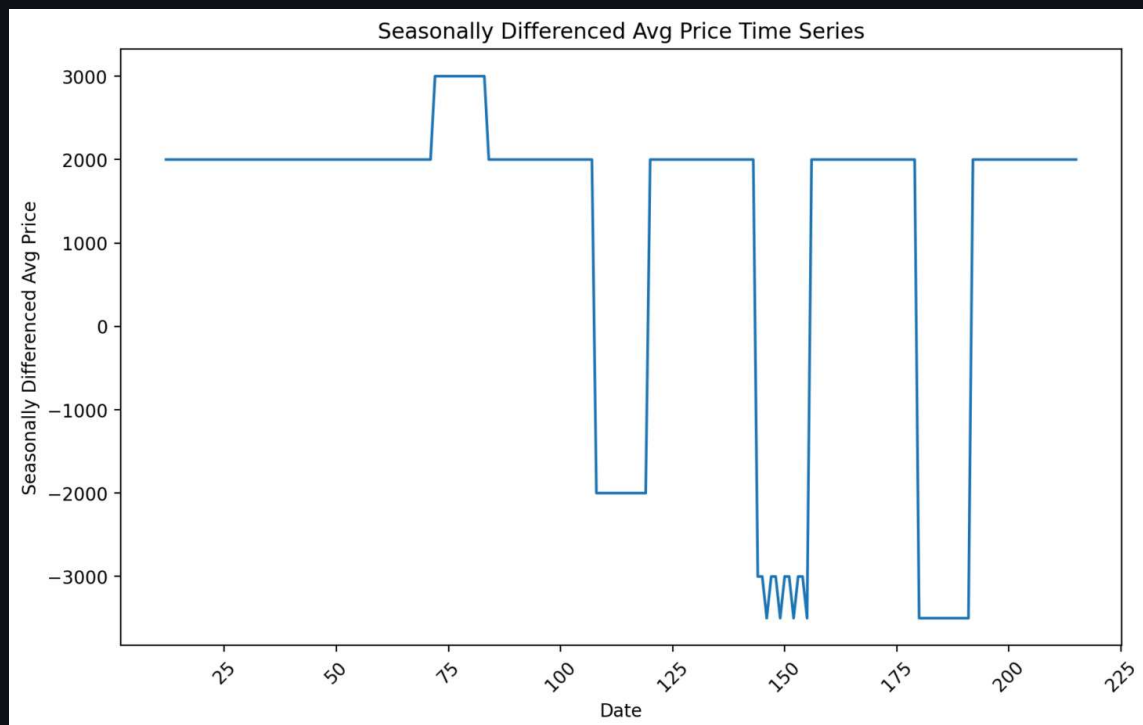
Critical Values:

1%: -3.462980134086401

5%: -2.875885461947131

10%: -2.5744164898444515

Seasonally Differenced Avg Price (After Differencing)



ADF Statistic (After Differencing): -2.7784079743014085

p-value (After Differencing): 0.06142484137826363

Critical Values (After Differencing):

1%: -3.465058702600837

5%: -2.8767942675230356

10%: -2.5749014492475535

3. Forecasting with SARIMA Model

Select Branch

Sirsi



Select Future Year

Select Future Month (1-12)

Historical Predictions vs Actual Prices:

	Date	Actual Price	Predicted Price
2024-03-31 00:00:00	2024-03-31 00:00:00	47,500	46,987.5924
2024-04-30 00:00:00	2024-04-30 00:00:00	48,000	47,508.8319
2024-05-31 00:00:00	2024-05-31 00:00:00	48,500	48,030.8934
2024-06-30 00:00:00	2024-06-30 00:00:00	49,000	48,552.0359
2024-07-31 00:00:00	2024-07-31 00:00:00	49,500	49,073.1347
2024-08-31 00:00:00	2024-08-31 00:00:00	50,000	49,594.1928
2024-09-30 00:00:00	2024-09-30 00:00:00	50,500	50,115.2132
2024-10-31 00:00:00	2024-10-31 00:00:00	51,000	50,663.1795
2024-11-30 00:00:00	2024-11-30 00:00:00	51,500	51,211.0471
2024-12-31 00:00:00	2024-12-31 00:00:00	52,000	51,758.8235

Predicted Prices for Arecanut (Future from 2025-2):

	Date	Predicted Avg Price
2023-10-31 00:00:00	2025-02-28 00:00:00	50,524.3405
2023-11-30 00:00:00	2025-03-31 00:00:00	51,048.6205
2023-12-31 00:00:00	2025-04-30 00:00:00	51,572.8443
2024-01-31 00:00:00	2025-05-31 00:00:00	45,945.8223
2024-02-29 00:00:00	2025-06-30 00:00:00	46,467.1717

Arecanut Price Forecast for Sirsi

