

Name:- Bhagyashri Thakur Roll No :- 163 PRn :- 202201090005 Topic:-

Select any one real-life **dataset**. Perform data analysis. Identify 10 grains for a given **dataset**. Develop an interactive dashboard using the matplotlib/Seaborn library. (Use any 10 different graphs with proper titles, legends, axis names, etc. to map identified grains)

Table:-

1	State	District	Market	Commodity	Variety	Grade	Min Price	Max Price	Modal Price
2	Andhra Pradesh	Chittoor	Chittoor	Gur(Jaggery)	NO 2	FAQ	3200	3400	3200
3	Andhra Pradesh	Chittoor	Chittoor	Mango	Neelam	Medium	700	1500	1200
4	Andhra Pradesh	Chittoor	Chittoor	Mango	Totapuri	Medium	1400	1800	1600
5	Andhra Pradesh	Cuddapah	Cuddapah	Groundnut	Local	FAQ	4053	7583	7553
6	Andhra Pradesh	Cuddapah	Cuddapah	Turmeric	Bulb	FAQ	4778	6160	5841
7	Andhra Pradesh	Cuddapah	Cuddapah	Turmeric	Finger	FAQ	3012	6619	6175
8	Andhra Pradesh	East Godavari	Peddapuram	Paddy(Dhan)(Common)		1001 FAQ	2040	2050	2041
9	Andhra Pradesh	East Godavari	Pithapuram	Paddy(Dhan)(Common)		1001 FAQ	2040	2060	2050
10	Andhra Pradesh	East Godavari	Prattipadu	Paddy(Dhan)(Common)		1001 FAQ	2040	2060	2050
11	Andhra Pradesh	East Godavari	Sampara	Paddy(Dhan)(Common)	Swarna Masuri (New)	FAQ	2150	2200	2180
12	Andhra Pradesh	Guntur	Duggirala	Turmeric	Bulb	FAQ	5600	6300	6000
13	Andhra Pradesh	Guntur	Duggirala	Turmeric	Finger	FAQ	5725	6300	6000
14	Andhra Pradesh	Guntur	Tenali	Black Gram (Urd Beans)(Whole)	Black Gram (Whole)	FAQ	8100	8300	8200
15	Andhra Pradesh	Guntur	Tenali	Lemon	Lemon	FAQ	1000	2500	1500
16	Andhra Pradesh	Kurnool	Alur	Jowar(Sorghum)	Jowar (White)	FAQ	3020	3080	3050
17	Andhra Pradesh	Kurnool	Kurnool	Groundnut	Local	FAQ	6083	7921	7503
18	Andhra Pradesh	Visakhapatnam	Anakapalli	Gur(Jaggery)	NO 3	FAQ	3850	3950	3900
19	Chandigarh	Chandigarh	Chandigarh(Grain/Fruit)	Bottle gourd	Other	FAQ	1000	3000	2000
20	Chandigarh	Chandigarh	Chandigarh(Grain/Fruit)	Cauliflower	Other	FAQ	1000	4500	4000
21	Chandigarh	Chandigarh	Chandigarh(Grain/Fruit)	Cucumbar(Kheers)	Other	FAQ	1500	2500	2000
22	Chandigarh	Chandigarh	Chandigarh(Grain/Fruit)	Green Chilli	Other	FAQ	1500	3000	2500
23	Chandigarh	Chandigarh	Chandigarh(Grain/Fruit)	Lemon	Other	FAQ	2000	3000	2600
24	Chandigarh	Chandigarh	Chandigarh(Grain/Fruit)	Mango	Other	Medium	1000	3500	3000
25	Chandigarh	Chandigarh	Chandigarh(Grain/Fruit)	Mousambi(Sweet Lime)	Other	Medium	4000	5500	5000
26	Chandigarh	Chandigarh	Chandigarh(Grain/Fruit)	Onion	Other	FAQ	700	1700	1500
27	Chandigarh	Chandigarh	Chandigarh(Grain/Fruit)	Pear Wet	Other	FAQ	1000	3500	3000
28	Chandigarh	Chandigarh	Chandigarh(Grain/Fruit)	Plum	Other	Medium	3000	6000	5000
29	Chandigarh	Chandigarh	Chandigarh(Grain/Fruit)	Pomegranate	Other	Medium	5000	12000	10000
30	Chandigarh	Chandigarh	Chandigarh(Grain/Fruit)	Potato	Other	FAQ	500	1500	1200
31	Chandigarh	Chandigarh	Chandigarh(Grain/Fruit)	Pumpkin	Other	FAQ	800	1200	1000
32	Chandigarh	Chandigarh	Chandigarh(Grain/Fruit)	Tomato	Other	FAQ	2400	8800	8000
33	Chattisgarh	Balodsbazar	Bhatgaon	Paddy(Dhan)(Common)	Paddy	FAQ	1550	1650	1600
34	Chattisgarh	Balodsbazar	Sarsiwan	Paddy(Dhan)(Common)	Paddy	FAQ	1550	1650	1600
35	Chattisgarh	Balrampur	Ramanujganj	Maize	Local	FAQ	1970	1970	1970
36	Chattisgarh	Balrampur	Ramanujganj	Wheat	Local	FAQ	2130	2130	2130
37	Chattisgarh	Bastar	Bastar	Maize	Other	FAQ	1600	1700	1650
38	Chattisgarh	Bastar	Devda	Maize	Other	FAQ	1600	1700	1650
39	Chattisgarh	Bastar	Jagdalpur	Dry Chillies	Other	FAQ	7000	7000	7000
40	Chattisgarh	Bastar	Jaitgiri	Maize	Other	FAQ	1600	1700	1650
41	Chattisgarh	Bastar	Lohandiguda	Maize	Other	FAQ	1600	1700	1650
42	Chattisgarh	Bastar	Muli	Maize	Other	FAQ	1600	1700	1650
43	Chattisgarh	Bijapur	Bharamgarh	Mahua Seed(Hippe seed)	Other	FAQ	1600	2000	1800
44	Chattisgarh	Bijapur	Bhopalpattnam	Mahua Seed(Hippe seed)	Other	FAQ	1600	2000	1800
45	Chattisgarh	Bijapur	Bijapur	Mahua Seed(Hippe seed)	Other	FAQ	1600	2000	1800
46	Chattisgarh	Bilaspur	Pendraroad	Paddy(Dhan)(Common)	Other	FAQ	1500	1500	1500
47	Chattisgarh	Dantewada	Gidam	Mahua	Other	FAQ	1500	1700	1600

54	Chattisgarh	Durg	Durg	Cabbage	Cabbage	FAO	1500	1700	1600	
55	Chattisgarh	Durg	Durg	Capcium	Capcium	FAO	5000	5500	5250	
56	Chattisgarh	Durg	Durg	Carrot	Carrot	FAO	2800	3200	3000	
57	Chattisgarh	Durg	Durg	Cauliflower	Cauliflower	FAO	5200	5600	5400	
58	Chattisgarh	Durg	Durg	Chikoo(Sapota)	Sapota	Medium	4000	6000	5000	
59	Chattisgarh	Durg	Durg	Coriander(Leaves)	Coriander	FAO	12000	14000	13000	
60	Chattisgarh	Durg	Durg	Cucumber(Kheera)	Cucumber	FAO	2000	2500	2250	
61	Chattisgarh	Durg	Durg	Garlic	Average	FAO	10000	14000	12000	
62	Chattisgarh	Durg	Durg	Green Chilli	Green Chilly	FAO	9000	11000	10000	
63	Chattisgarh	Durg	Durg	Gar	Gmar	FAO	5200	5600	5400	
64	Chattisgarh	Durg	Durg	Lemon	Lemon	FAO	4000	6000	5000	
65	Chattisgarh	Durg	Durg	Little gourd (Kudra)	Little gourd (Kudra)	FAO	3800	4000	3900	
66	Chattisgarh	Durg	Durg	Mango	Badami	Medium	5000	7000	6000	
67	Chattisgarh	Durg	Durg	Mousambi(Sweet Lime)	Mousambi	Medium	6000	8000	7000	
68	Chattisgarh	Durg	Durg	Onion	Nasik	FAO	1500	1700	1600	
69	Chattisgarh	Durg	Durg	Papsya (Raw)	Papsya (Raw)	FAO	1900	2000	1950	
70	Chattisgarh	Durg	Durg	Pomegranate	Pomegranate	Medium	20000	24000	22000	
71	Chattisgarh	Durg	Durg	Potato	Potato	FAO	1600	1800	1700	
72	Chattisgarh	Durg	Durg	Pumpkin	Pumpkin	FAO	1200	1400	1300	
73	Chattisgarh	Durg	Durg	Raddish	Raddish	FAO	1500	1600	1550	
74	Chattisgarh	Durg	Durg	Sweet Potato	Sweet Potato	FAO	2400	2600	2500	
75	Chattisgarh	Durg	Durg	Tinda	Tinda	FAO	1600	1800	1700	
76	Chattisgarh	Kanker	Charama	Paddy(Dhan)(Common)	Other	FAO	1980	1980	1980	
77	Chattisgarh	Kanker	Lakhanpuri	Paddy(Dhan)(Common)	Other	FAO	1980	1980	1980	
78	Chattisgarh	Kanker	Markapur	Paddy(Dhan)(Common)	Other	FAO	1980	1980	1980	
79	Chattisgarh	Koria	Baikunthpur	Kodo Millet (Varagu)	Other	FAO	1500	1500	1500	
80	Chattisgarh	Koria	Baikunthpur	Maize	Other	FAO	1955	1955	1955	
81	Chattisgarh	Koria	Baikunthpur	Paddy(Dhan)(Common)	Other	FAO	2045	2045	2045	
82	Chattisgarh	Koria	Mahendragarh	Tobacco	Other	FAO	5342	5342	5342	
83	Chattisgarh	Mungeli	Lormi	Paddy(Dhan)(Common)	Paddy fine	FAO	1600	1750	1750	
84	Chattisgarh	Narsajpur	Narsajpur	Millies	Other	FAO	3000	3500	3500	
85	Chattisgarh	Raigarh	Raigarh	Onion	Other	FAO	1800	2000	1800	
86	Chattisgarh	Raigarh	Raigarh	Potato	Other	FAO	1200	1800	1500	
87	Chattisgarh	Raigarh	Raigarh	Tomato	Other	FAO	6000	3000	8000	
88	Chattisgarh	Raipur	Abhanpur	Paddy(Dhan)(Common)	I.R.-64	FAO	1850	1850	1850	
89	Goa	North Goa	Valpoi	Arccavet(Botelnst/Supari)	Red	FAO	33500	33500	33500	
90	Goa	North Goa	Valpoi	Arccavet(Botelnst/Supari)	Supari	FAO	36500	36500	36500	
91	Goa	North Goa	Valpoi	Arccavet(Botelnst/Supari)	White	FAO	34500	34500	34500	
92	Gujarat	Amreli	Babra	Cotton	Other	FAO	7050	7100	7075	
93	Gujarat	Amreli	Babra	Groundnut	Other	FAO	6500	6700	6600	
94	Gujarat	Amreli	Bagasara	Bengal Gram(Gram)(Whole)	Average (Whole)	FAO	4460	4535	4495	
95	Gujarat	Amreli	Bagasara	Cotton	Other	FAO	6250	6825	6535	
96	Gujarat	Amreli	Bagasara	Soyabean	Yellow	FAO	4560	4700	4630	
97	Gujarat	Amreli	Bagasara	Wheat	Lokwa Gujrat	FAO	2250	2285	2265	
98	Gujarat	Amreli	Dhori	Cotton	Other	FAO	7140	7140	7140	
99	Gujarat	Amreli	Dhori	Ground Nut Seed	Ground Nut Seed	FAO	8250	8250	8250	
100	Gujarat	Amreli	Savarkamella	Rain(Pearl Millet)(Camba)	Deeki	FAO	1900	2120	2010	

```
import seaborn as sns import
matplotlib.pyplot as plt import
pandas as pd

# Load the CSV file into a DataFrame df =
pd.read_csv("/content/daily price.csv")

# Statement 1: Distribution of Modal Prices
sns.histplot(data=df, x='Modal Price')
plt.xlabel('Modal Price') plt.ylabel('Count')
plt.title('Distribution of Modal Prices') plt.show()

# Statement 2: Count of Each Commodity
sns.countplot(data=df, x='Commodity')
plt.xlabel('Commodity') plt.ylabel('Count')
plt.title('Count of Commodities')
plt.xticks(rotation=45) plt.show()

# Statement 3: Average Min and Max Prices by State
```

```
sns.barplot(data=df, x='State', y='Min Price')
plt.xlabel('State') plt.ylabel('Average Min
Price') plt.title('Average Minimum Price by
State') plt.xticks(rotation=45) plt.show()
sns.barplot(data=df, x='State', y='Max
Price') plt.xlabel('State')
plt.ylabel('Average Max Price')
plt.title('Average Maximum Price by State')
plt.xticks(rotation=45) plt.show()

# Statement 4: Relationship between Min Price and Max Price
sns.scatterplot(data=df, x='Min Price', y='Max Price')
plt.xlabel('Min Price') plt.ylabel('Max Price')
plt.title('Min Price vs Max Price') plt.show()

# Statement 5: Average Modal Price by Market
sns.barplot(data=df, x='Market', y='Modal Price')
plt.xlabel('Market') plt.ylabel('Average Modal
Price') plt.title('Average Modal Price by
Market') plt.xticks(rotation=45) plt.show()

# Statement 6: Modal Price Comparison across Grades
sns.boxplot(data=df, x='Grade', y='Modal Price')
plt.xlabel('Grade') plt.ylabel('Modal Price')
plt.title('Modal Price by Grade')
plt.xticks(rotation=45) plt.show()

# Statement 7: Modal Price Distribution for Each Variety
sns.violinplot(data=df, x='Variety', y='Modal Price')
plt.xlabel('Variety') plt.ylabel('Modal Price')
plt.title('Modal Price Distribution by Variety')
plt.xticks(rotation=45) plt.show()
```



```

# Statement 8: Modal Price Trend by District
sns.lineplot(data=df, x='District', y='Modal Price')
plt.xlabel('District') plt.ylabel('Modal Price')
plt.title('Modal Price Trend by District')
plt.xticks(rotation=45) plt.show()

# Statement 9: Average Modal Price by Commodity
sns.barplot(data=df, x='Commodity', y='Modal Price')
plt.xlabel('Commodity') plt.ylabel('Average Modal
Price') plt.title('Average Modal Price by
Commodity') plt.xticks(rotation=45) plt.show()

# Statement 10: Count of Each District
sns.countplot(data=df, x='District')
plt.xlabel('District')
plt.ylabel('Count') plt.title('Count
of Districts') plt.xticks(rotation=45)
plt.show()

# Statement 11: Modal Price Distribution by State and Market
sns.boxplot(data=df, x='State', y='Modal Price', hue='Market')
plt.xlabel('State') plt.ylabel('Modal Price') plt.title('Modal
Price Distribution by State and Market')
plt.xticks(rotation=45) plt.legend(title='Market') plt.show()

# Statement 12: Modal Prices for Each Variety by Market
sns.barplot(data=df, x='Variety', y='Modal Price', hue='Market')
plt.xlabel('Variety') plt.ylabel('Modal Price')
plt.title('Modal Price by Variety and Market')
plt.xticks(rotation=45)
plt.legend(title='Market') plt.show()

# Statement 13: Average Modal Price by Commodity and Grade
sns.barplot(data=df, x='Commodity', y='Modal Price', hue='Grade')
plt.xlabel('Commodity')

```

```

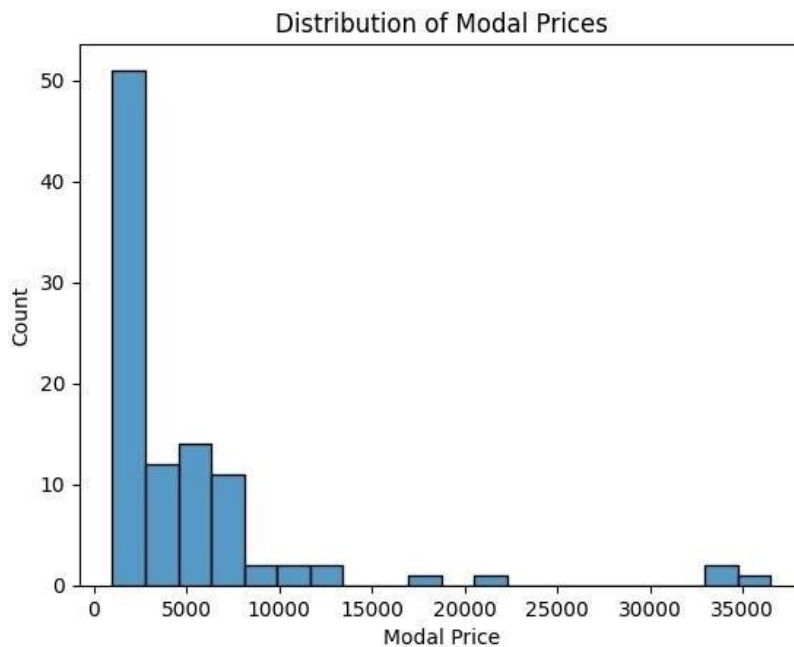
plt.ylabel('Average Modal Price') plt.title('Average
Modal Price by Commodity and Grade')
plt.xticks(rotation=45) plt.legend(title='Grade')
plt.show()

# Statement 14: Modal Price Distribution by State and Commodity
sns.violinplot(data=df, x='State', y='Modal Price', hue='Commodity')
plt.xlabel('State') plt.ylabel('Modal Price') plt.title('Modal Price
Distribution by State and Commodity') plt.xticks(rotation=45)
plt.legend(title='Commodity') plt.show()

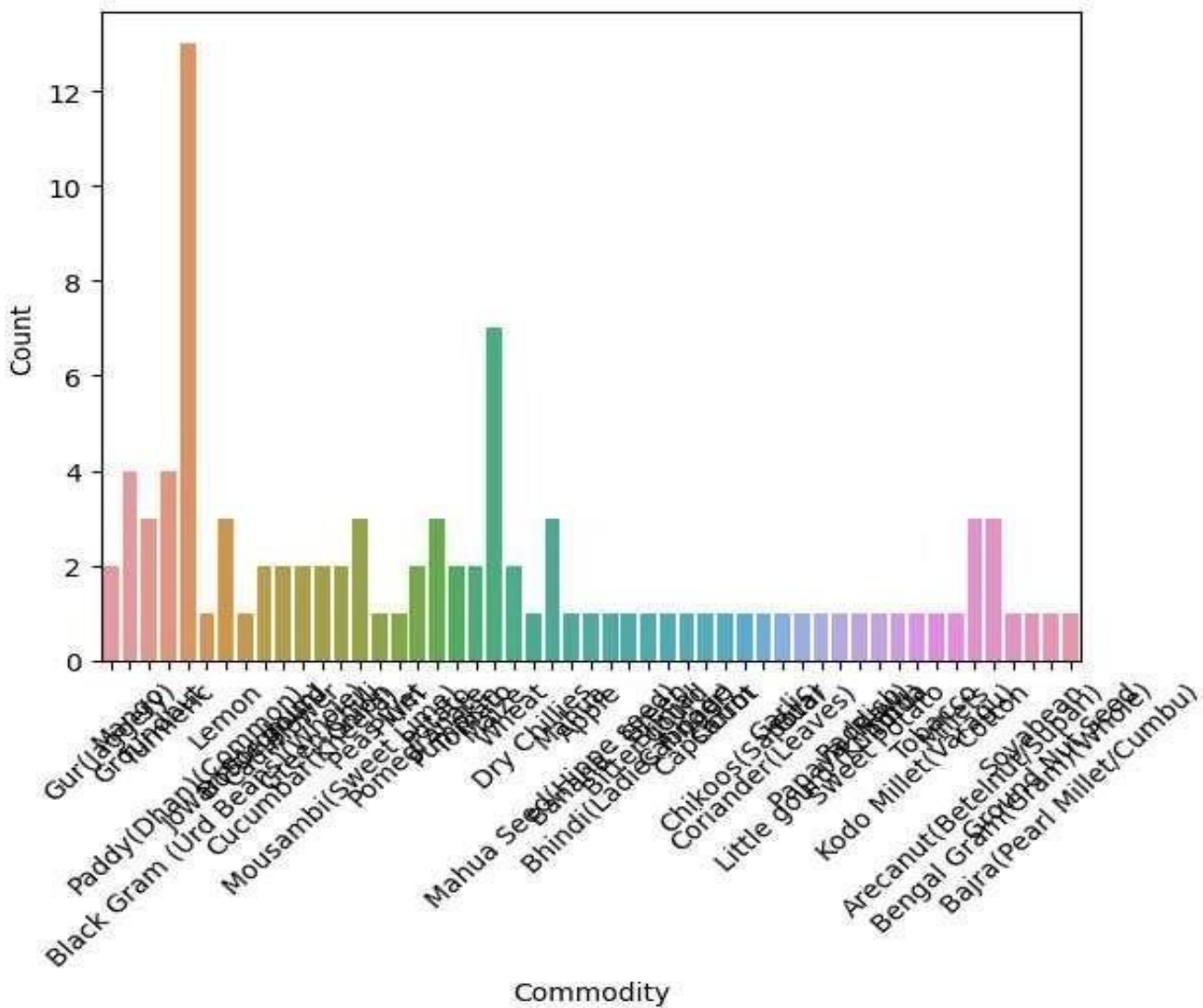
# Statement 15: Relationship between Modal Price and Market by District
sns.scatterplot(data=df, x='Modal Price', y='Market', hue='District')
plt.xlabel('Modal Price') plt.ylabel('Market') plt.title('Modal Price
vs Market by District') plt.legend(title='District') plt.show()

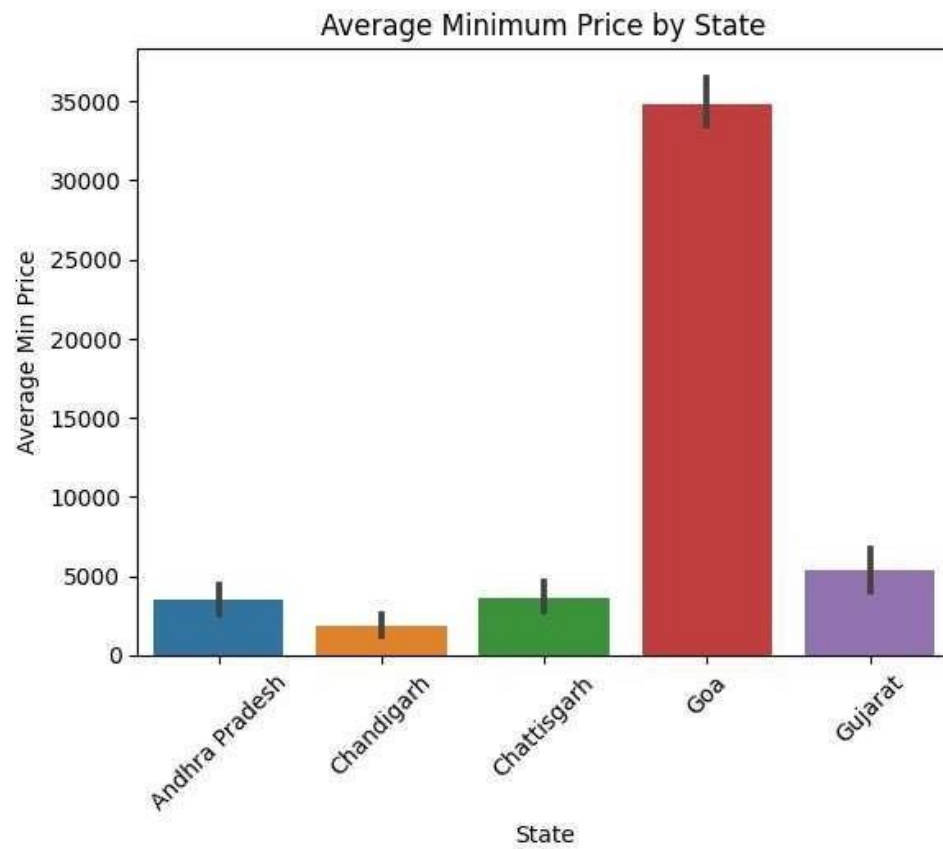
```

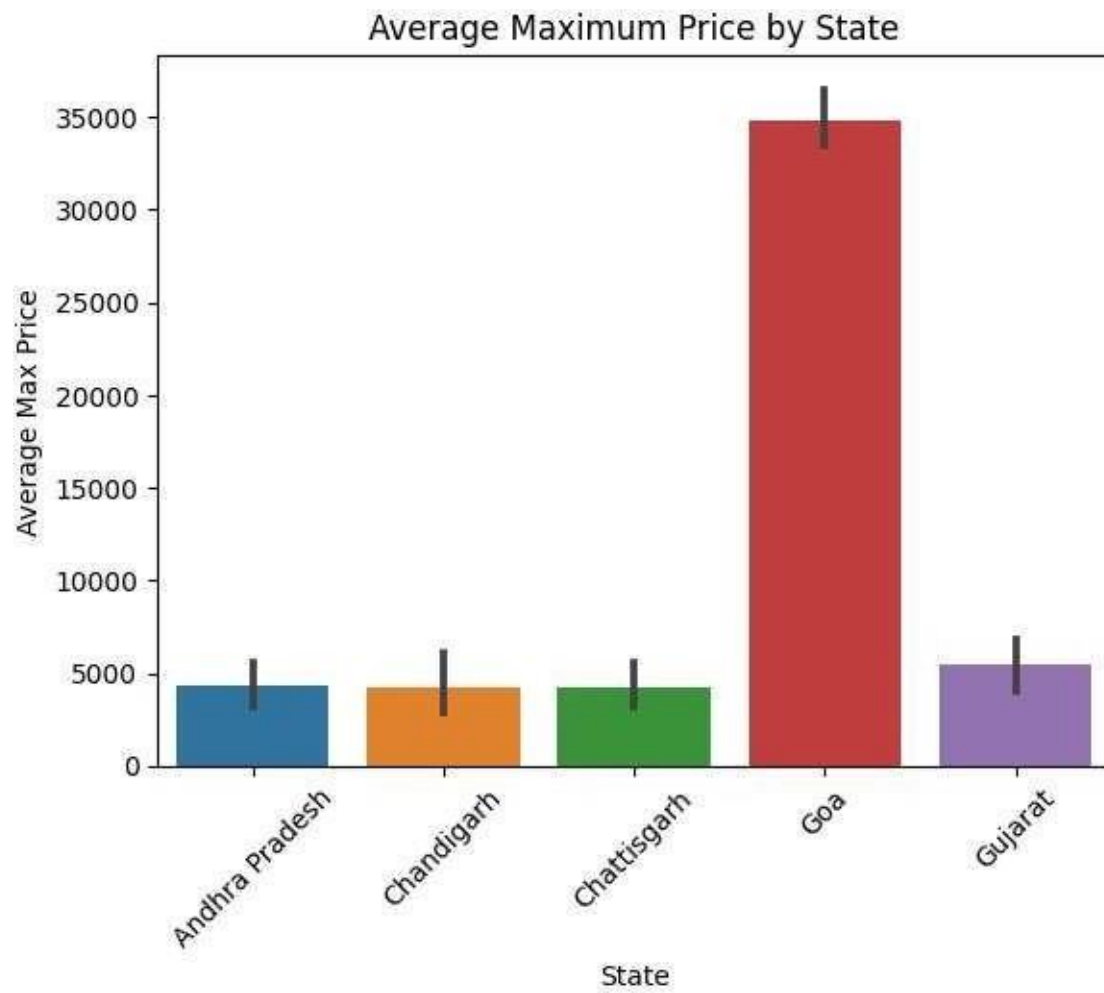
output :-



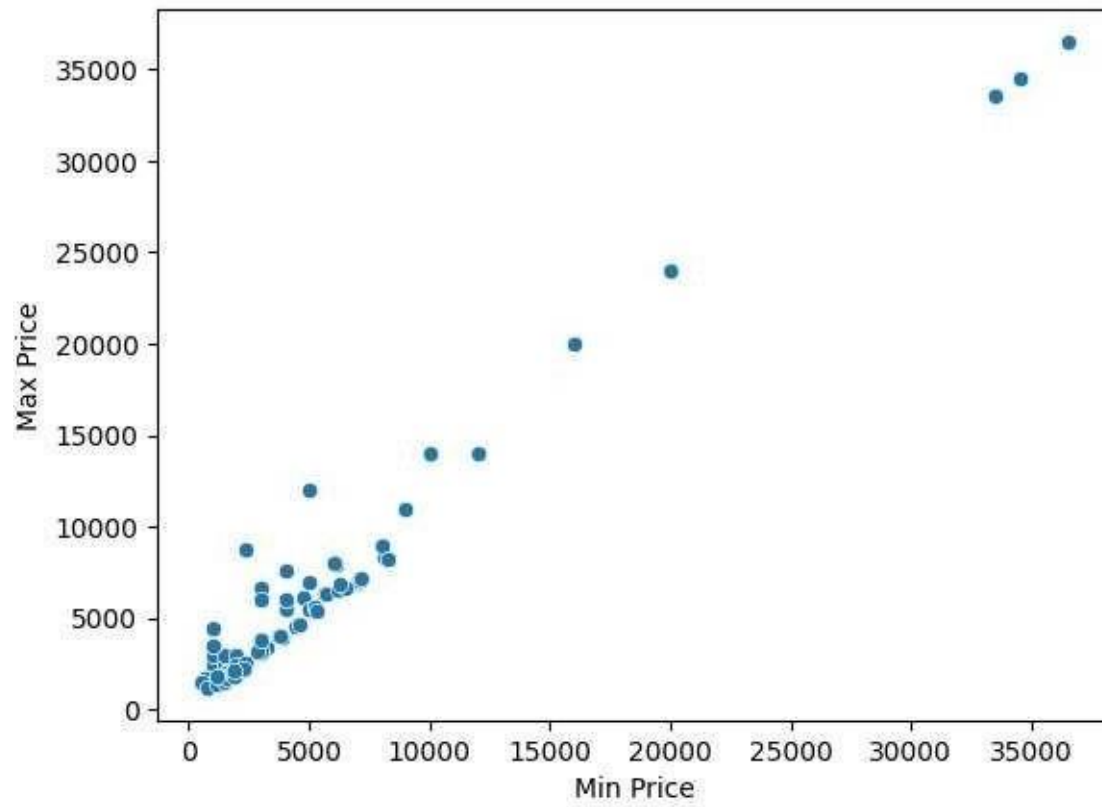
Count of Commodities



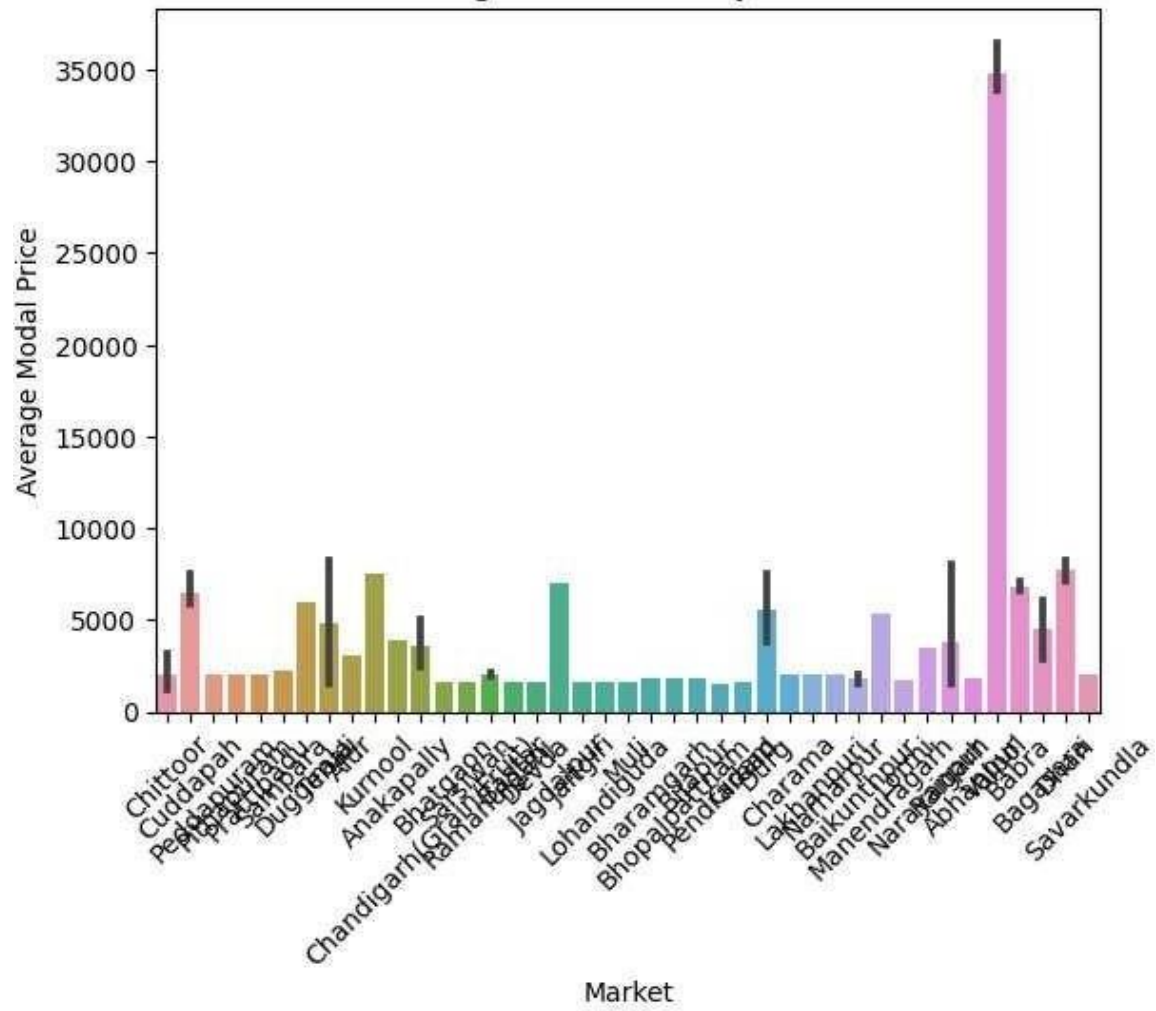


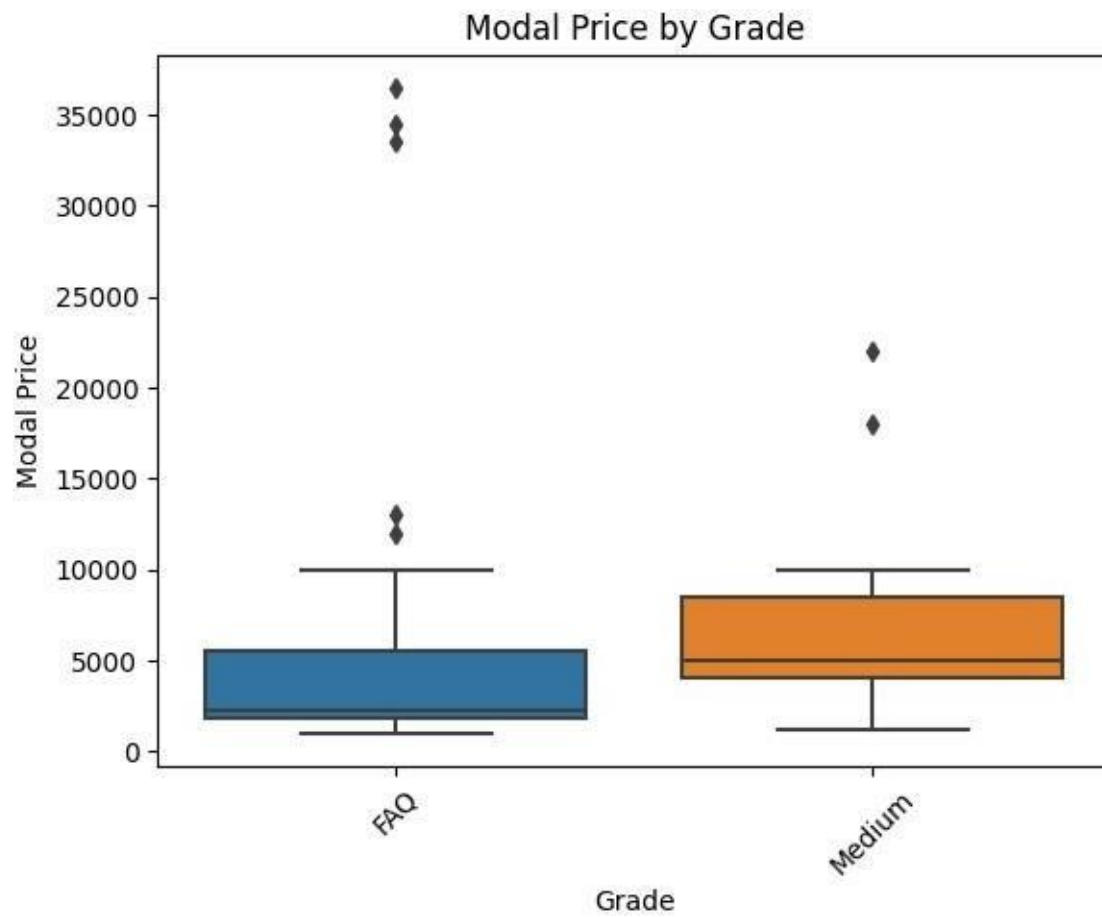


Min Price vs Max Price

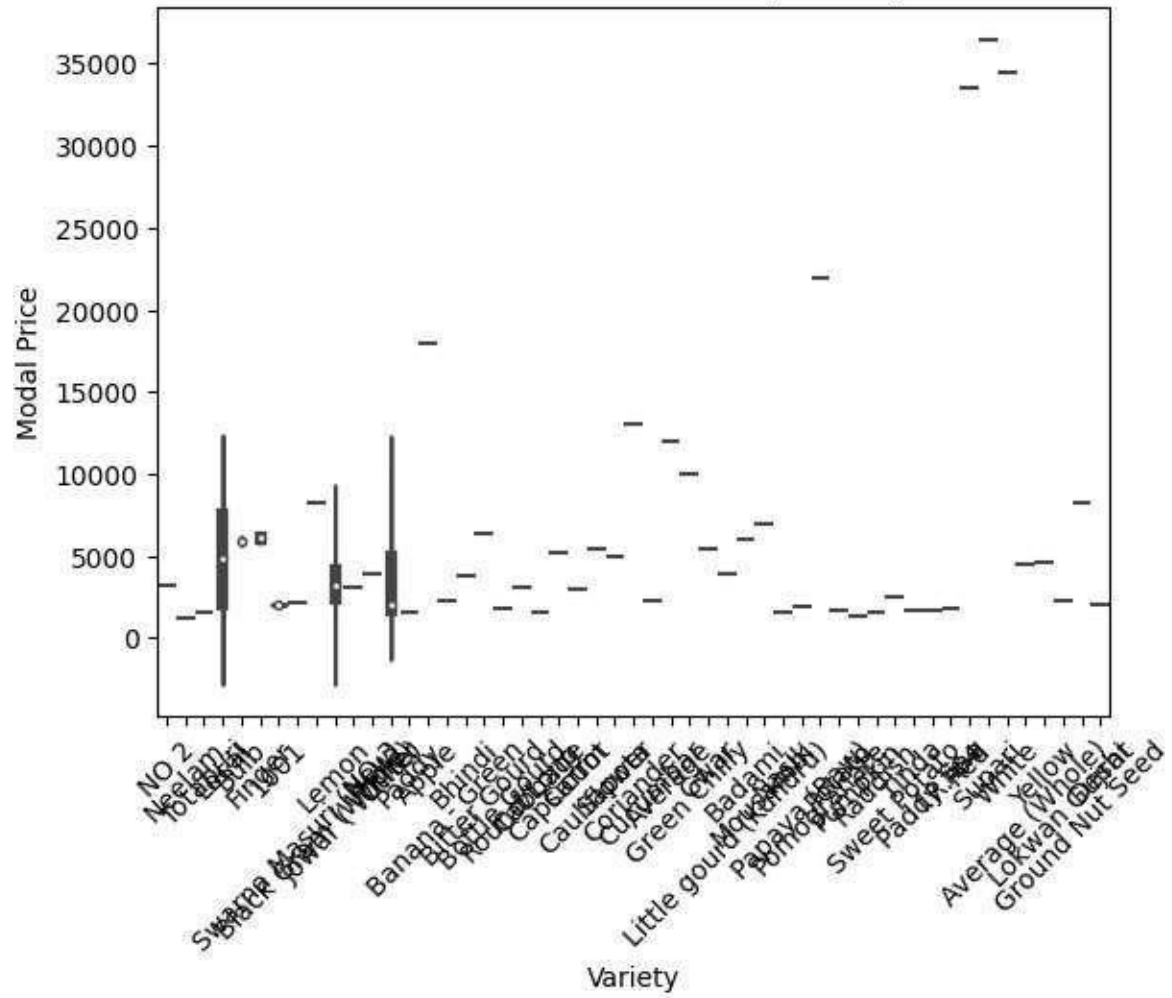


Average Modal Price by Market

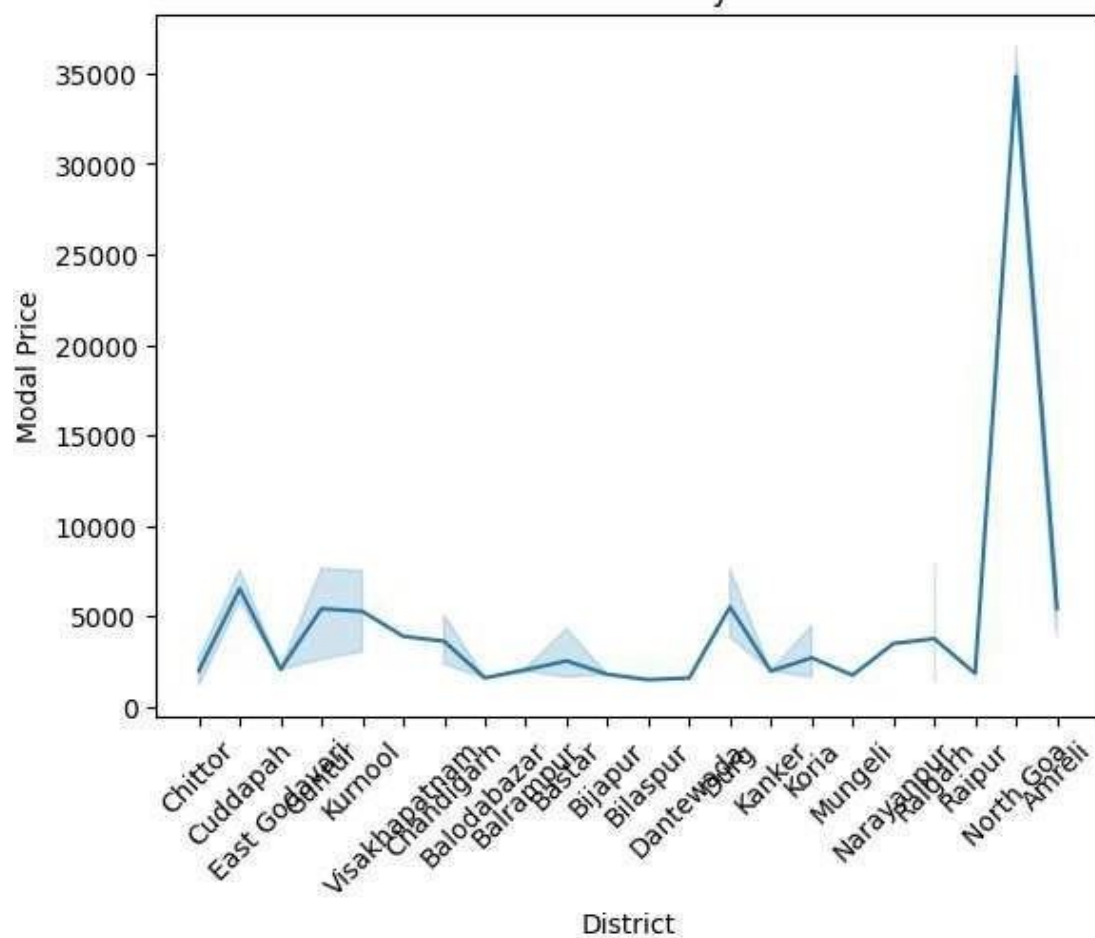




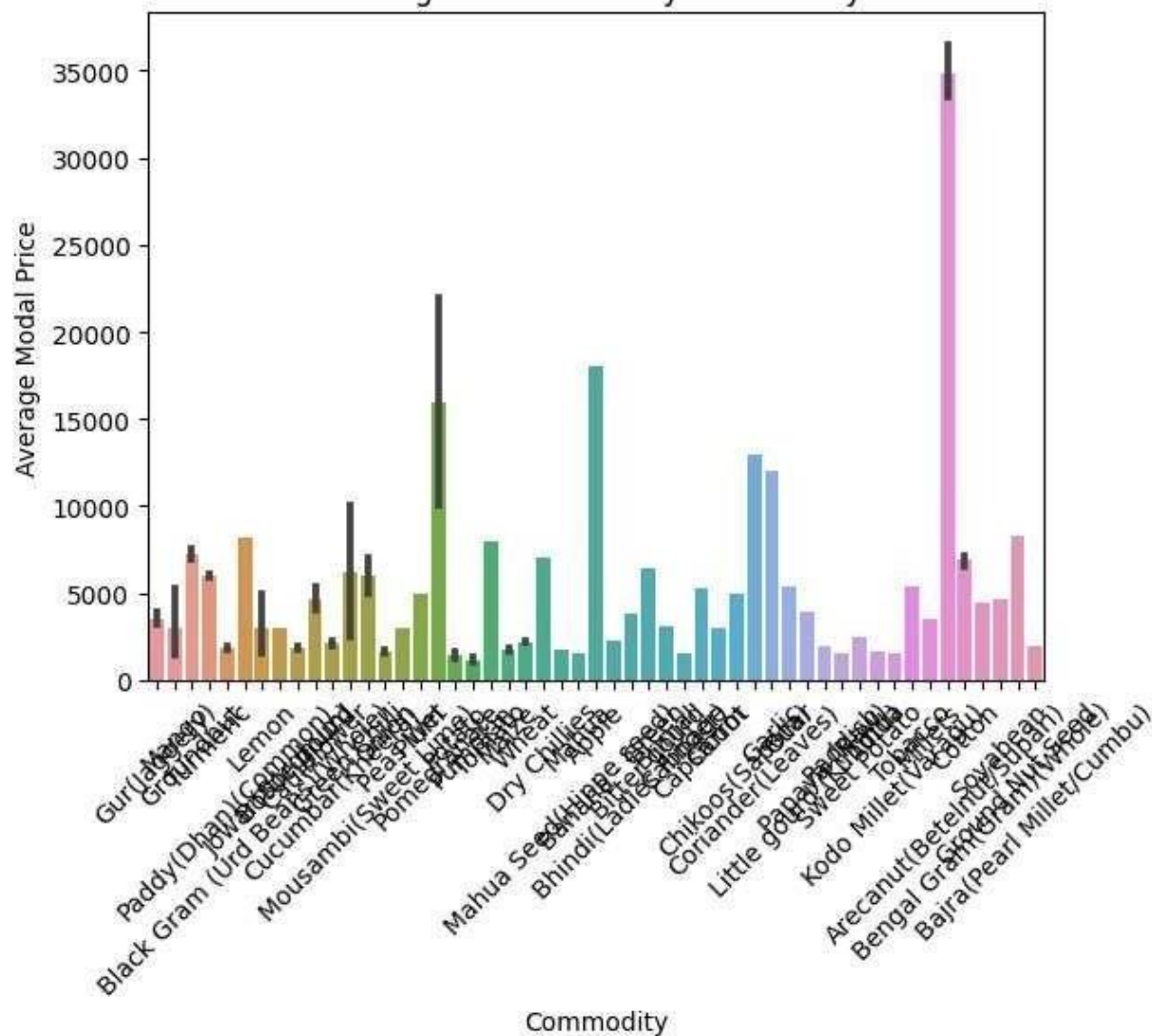
Modal Price Distribution by Variety

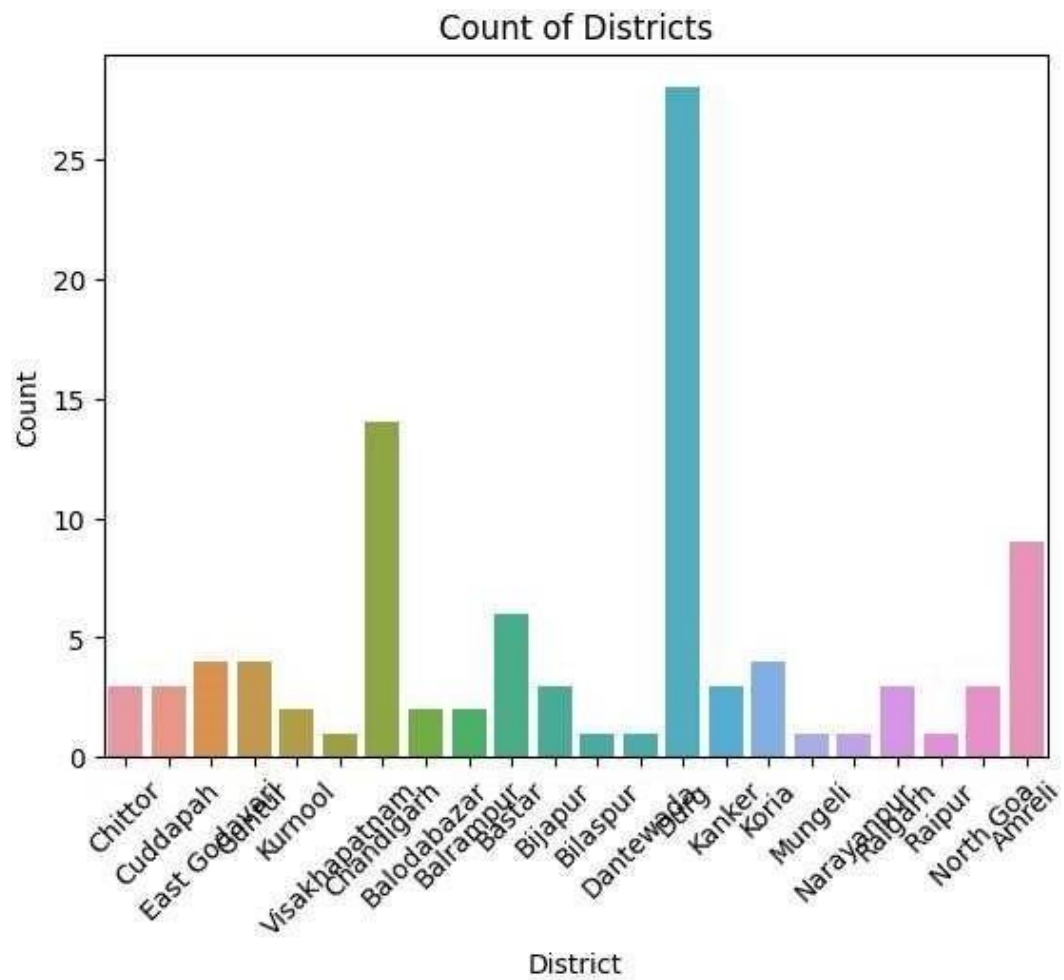


Modal Price Trend by District

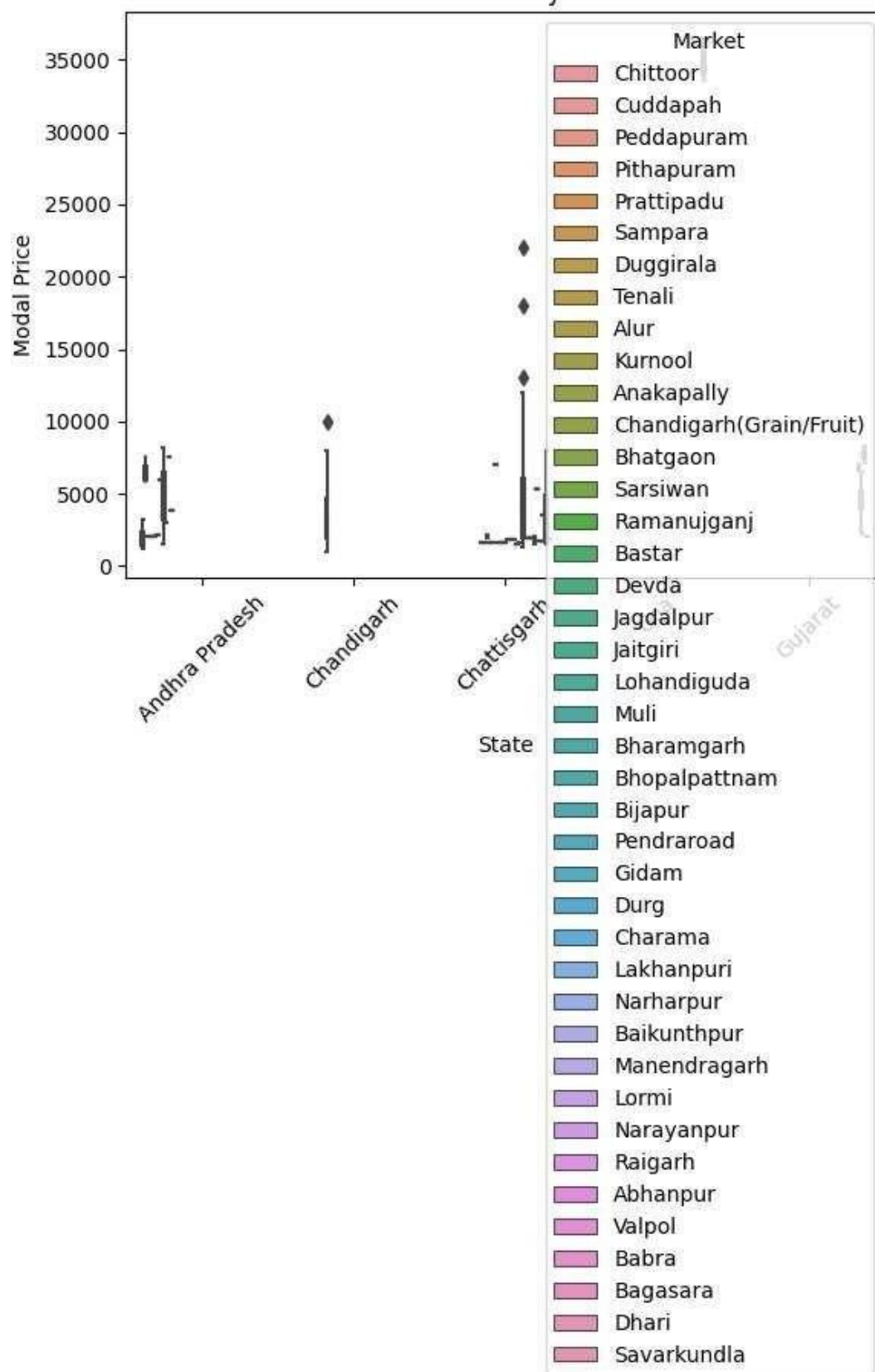


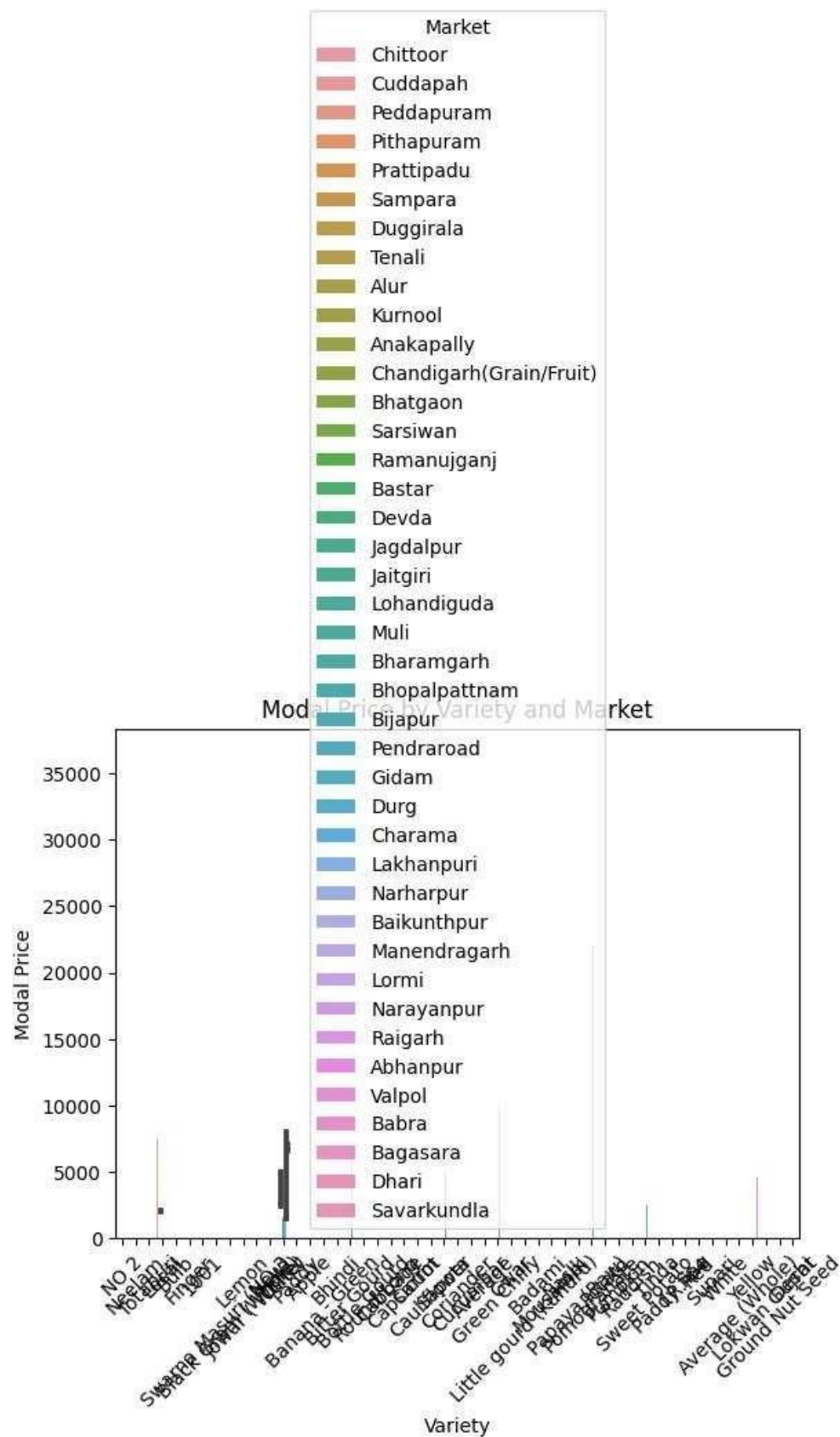
Average Modal Price by Commodity



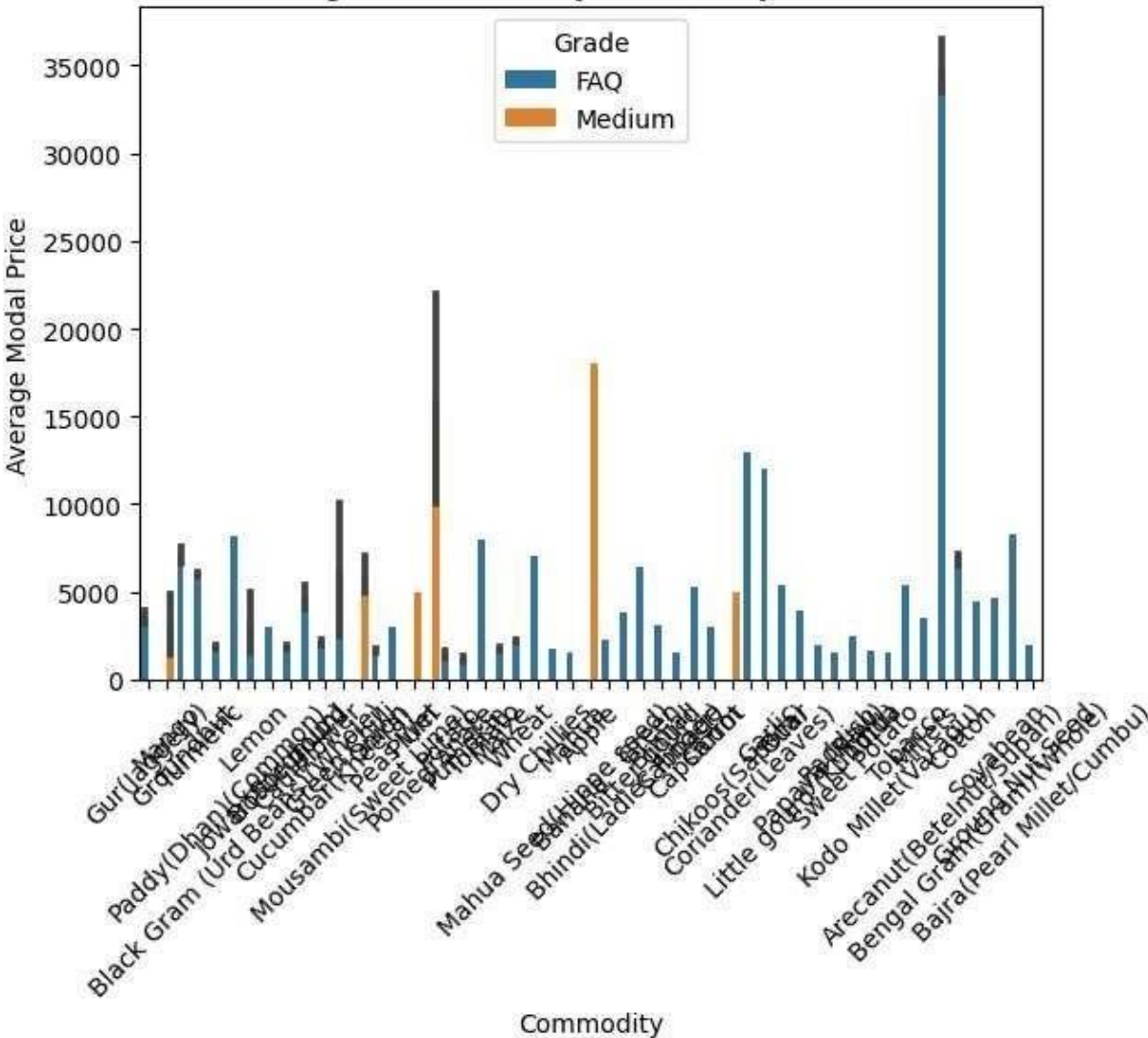


Modal Price Distribution by State and Market

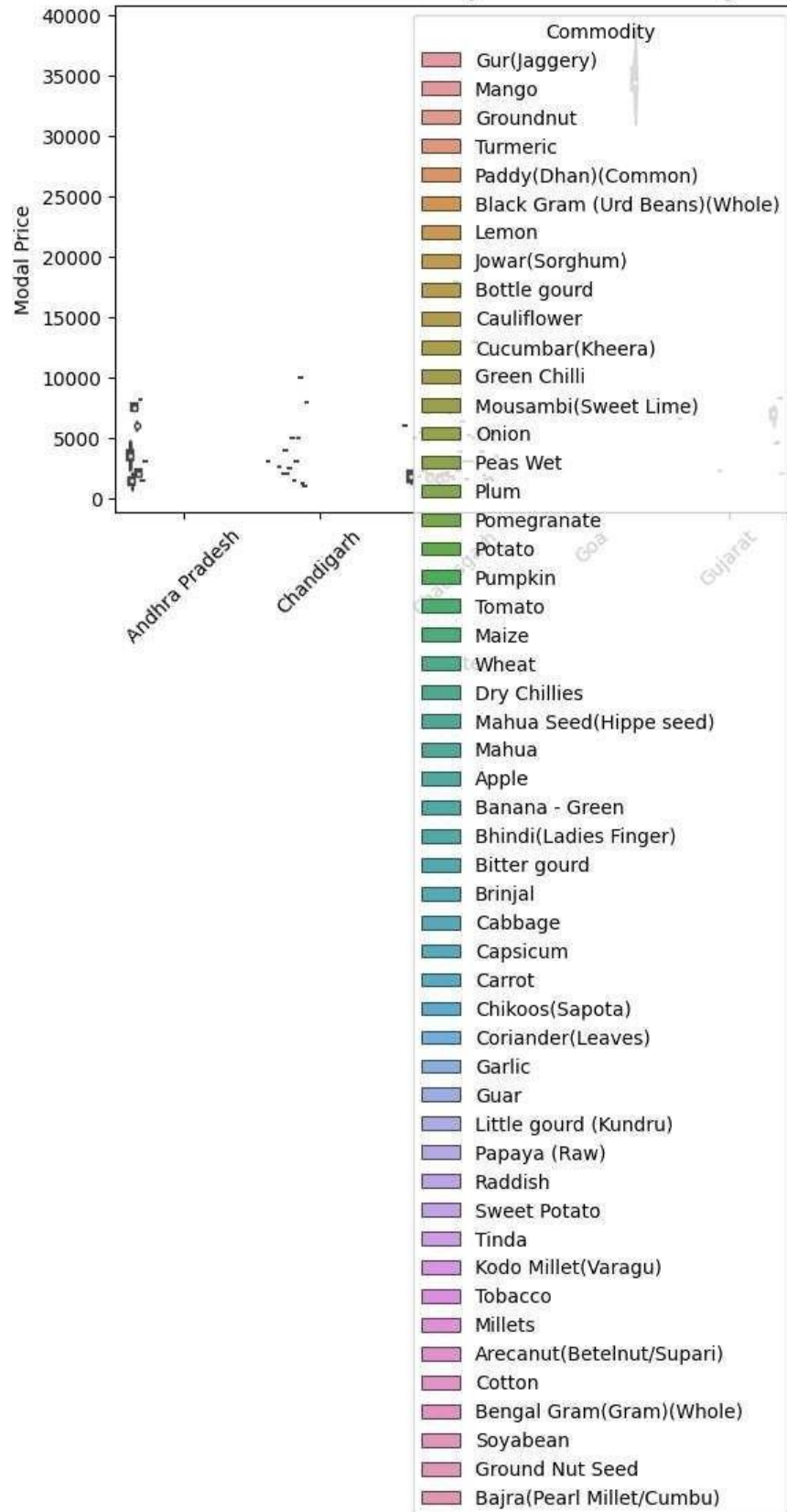




Average Modal Price by Commodity and Grade



Modal Price Distribution by State and Commodity



Modal Price vs Market by District

