In [2]:
```
import numpy as np
import pandas as pd
import seaborn as sns
import matplotlib.pyplot as plt
import plotly.express as px
```

In [3]:
```
df = pd.read_csv('E:\Startup_Counts_Across_India.csv')
```

In [4]:
```
df
```

Out[4]:

	S No.	Year	State	Industry	Count
0	1	2022	Andaman and Nicobar Islands	Agriculture	1
1	2	2022	Andaman and Nicobar Islands	AR VR (Augmented + Virtual Reality)	1
2	3	2022	Andaman and Nicobar Islands	Construction	1
3	4	2022	Andaman and Nicobar Islands	Internet of Things	1
4	5	2022	Andaman and Nicobar Islands	Marketing	1
...	...	...	...	...	...
5886	5887	2016	Tamil Nadu	NOT SPECIFIED	55
5887	5888	2016	Telangana	NOT SPECIFIED	20
5888	5889	2016	Uttar Pradesh	NOT SPECIFIED	29
5889	5890	2016	Uttarakhand	NOT SPECIFIED	4
5890	5891	2016	West Bengal	NOT SPECIFIED	8

5891 rows × 5 columns

In [5]:
```
df.head().style.background_gradient(cmap='coolwarm')
```

Out[5]:

	S No.	Year	State	Industry	Count
0	1	2022	Andaman and Nicobar Islands	Agriculture	1
1	2	2022	Andaman and Nicobar Islands	AR VR (Augmented + Virtual Reality)	1
2	3	2022	Andaman and Nicobar Islands	Construction	1
3	4	2022	Andaman and Nicobar Islands	Internet of Things	1
4	5	2022	Andaman and Nicobar Islands	Marketing	1

In [6]:
```
fig = px.scatter(df,x="Industry", y="Year", size="Count", color="Count",template='plotly
fig.show()
```

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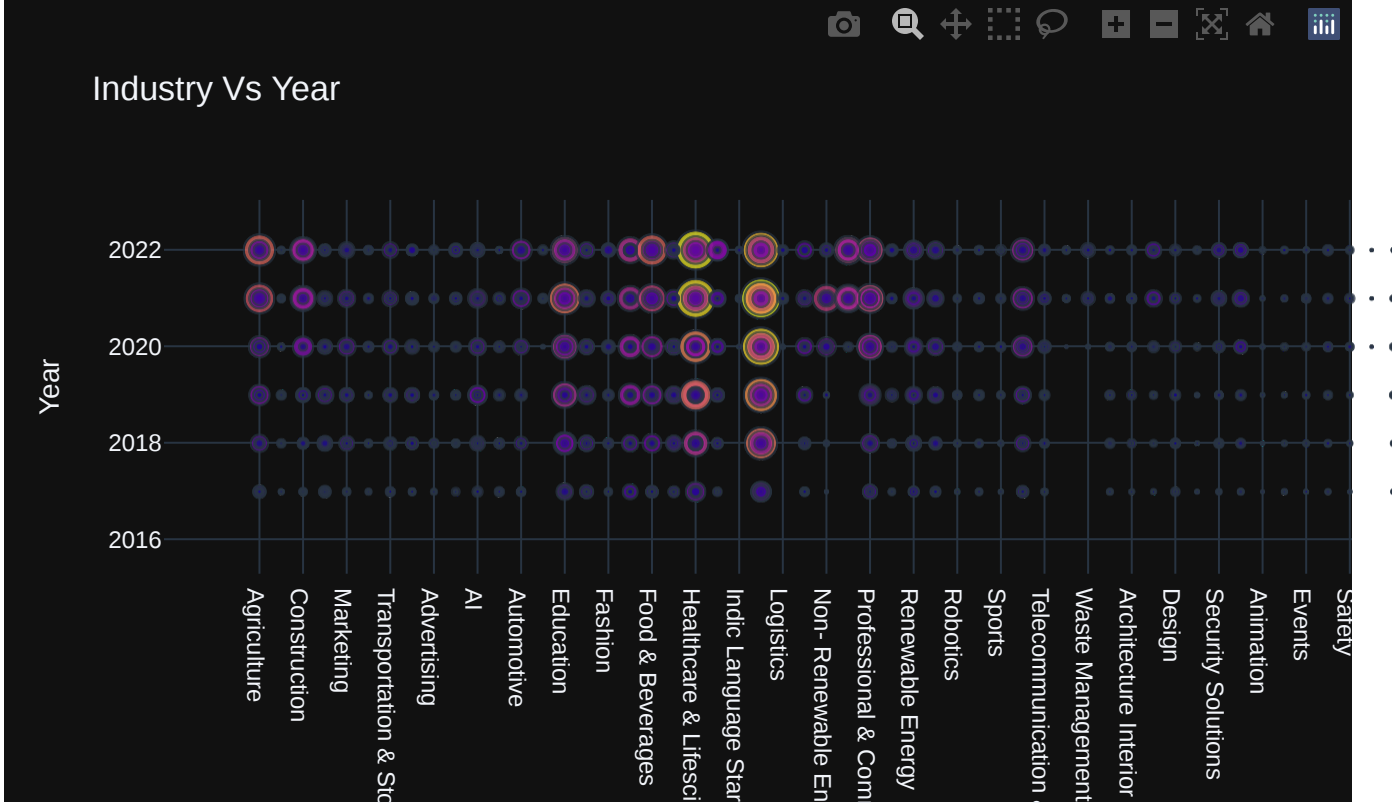
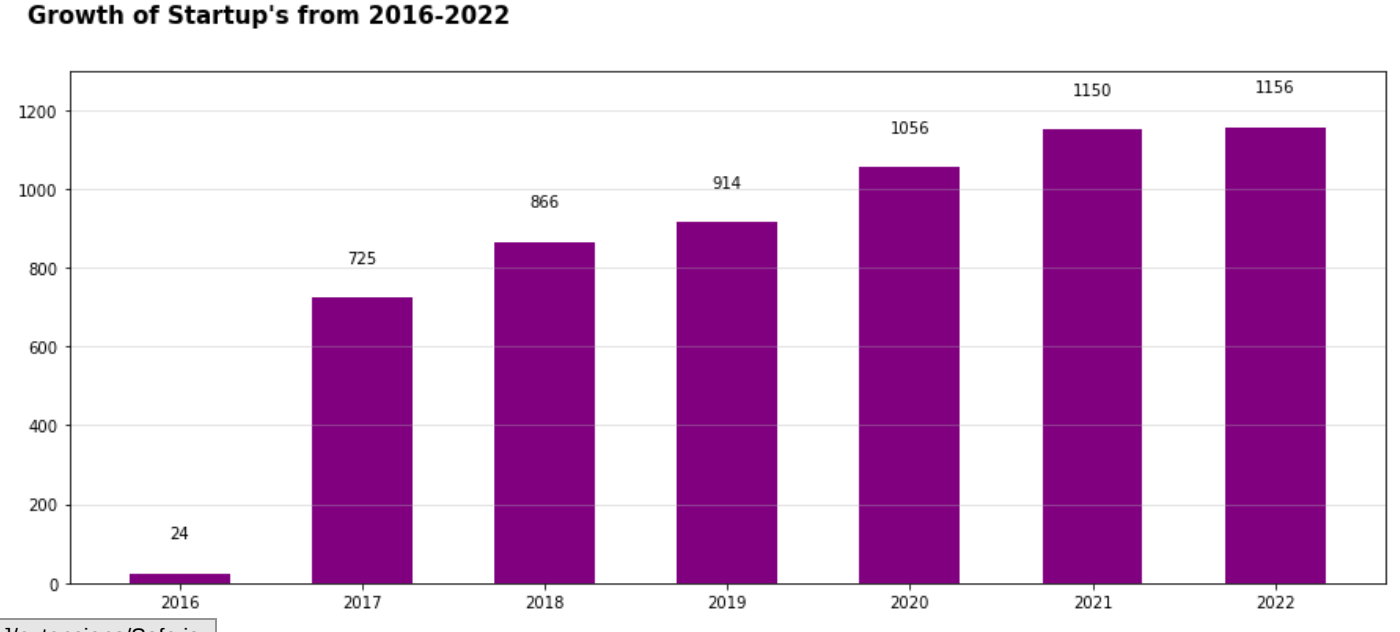


In [7]:

```
fig, ax = plt.subplots(1,1, figsize=(15, 6))
df_year = df['Year'].value_counts().sort_index()
ax.bar(df_year.index, df_year, width=0.55,linewidth=0.7, color = 'purple')
for i in df_year.index:
    ax.annotate(f"{df_year[i]}",xy=(i, df_year[i] + 100),
                va = 'center', ha='center')
ax.set_ylim(0, 1300)
fig.text(0.1, 0.95, "Growth of Startup's from 2016-2022", fontsize=15, fontweight='bold'

ax.grid(axis='y', linestyle='-', alpha=0.4)
```



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In [8]:
```
df.groupby('Industry').size().sort_values(ascending=False).to_frame().style.background_g
```

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Out[8]:

Industry	0
IT Services	176
Education	159
Construction	158
Healthcare & Lifesciences	157
Food & Beverages	156
Professional & Commercial Services	156
Agriculture	152
Travel & Tourism	147
Retail	144
Marketing	142
Green Technology	141
Renewable Energy	139
Technology Hardware	135
Transportation & Storage	135
Textiles & Apparel	129
Media & Entertainment	129
Human Resources	129
Enterprise Software	128
Automotive	122
Internet of Things	121
Finance Technology	119
AI	118
Security Solutions	117
Advertising	113
Telecommunication & Networking	113
House-Hold Services	111
Other Specialty Retailers	109
Non- Renewable Energy	108
Real Estate	107
Fashion	106
Chemicals	106
Design	104
Social Impact	101
Social Network	100
Aeronautics Aerospace & Defence	99
Robotics	99
Analytics	96
AR VR (Augmented + Virtual Reality)	94

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Industry	0
Events	94
Architecture Interior Design	92
Art & Photography	90
Sports	84
Computer Vision	79
Safety	77
Others	75
Pets & Animals	73
Waste Management	59
Nanotechnology	59
NOT SPECIFIED	57
Logistics	57
Dating Matrimonial	45
Animation	43
Biotechnology	41
Indic Language Startups	38
Toys and Games	37
Airport Operations	10
Passenger Experience	6

In [11]:
```
fig, ax = plt.subplots(1,1, figsize=(20, 6))
df_ind = df['Industry'].value_counts().iloc[:20]

ax.bar(df_ind.index, df_ind, width=0.55,linewidth=0.7, color = 'green')
for i in df_ind.index:
    ax.annotate(f"{df_ind[i]}",xy=(i, df_ind[i] + 20),va = 'center', ha='center')
ax.set_ylim(0, 220)
fig.text(0.1, 0.95, "Top 20 Startup Industries from 2016", fontsize=15, fontweight='bold
plt.xticks(rotation=90)
ax.grid(axis='y', linestyle='-', alpha=0.4)
```

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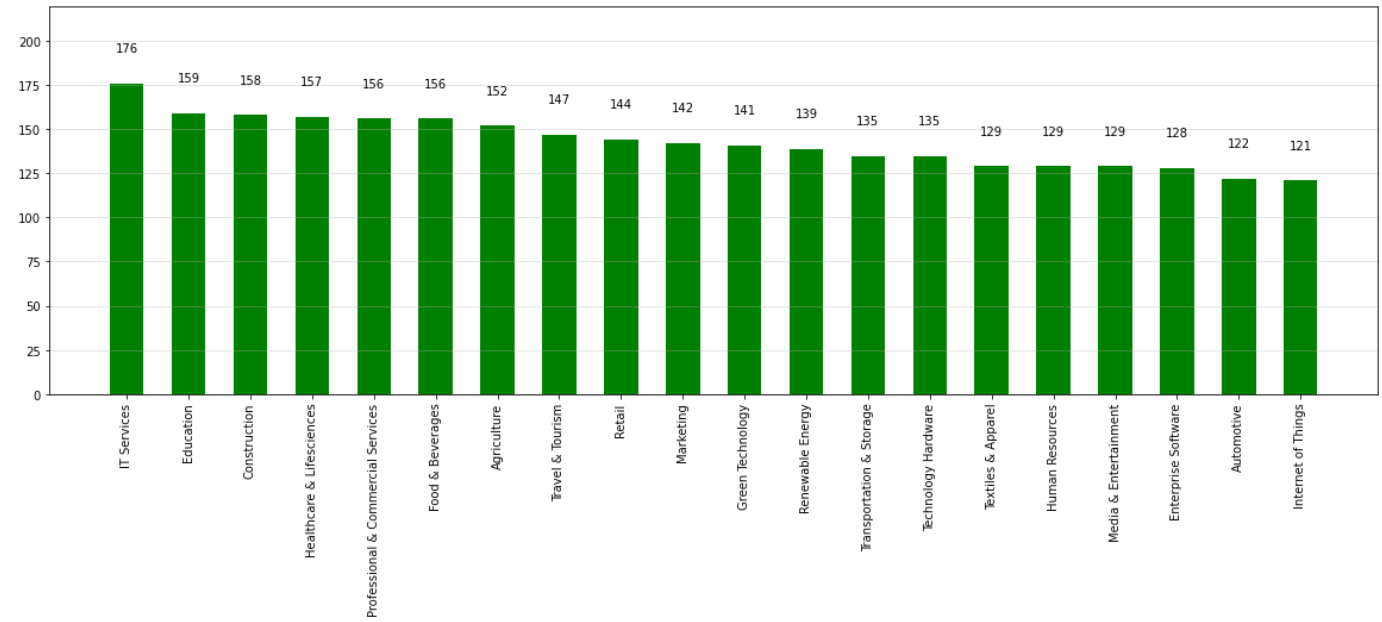
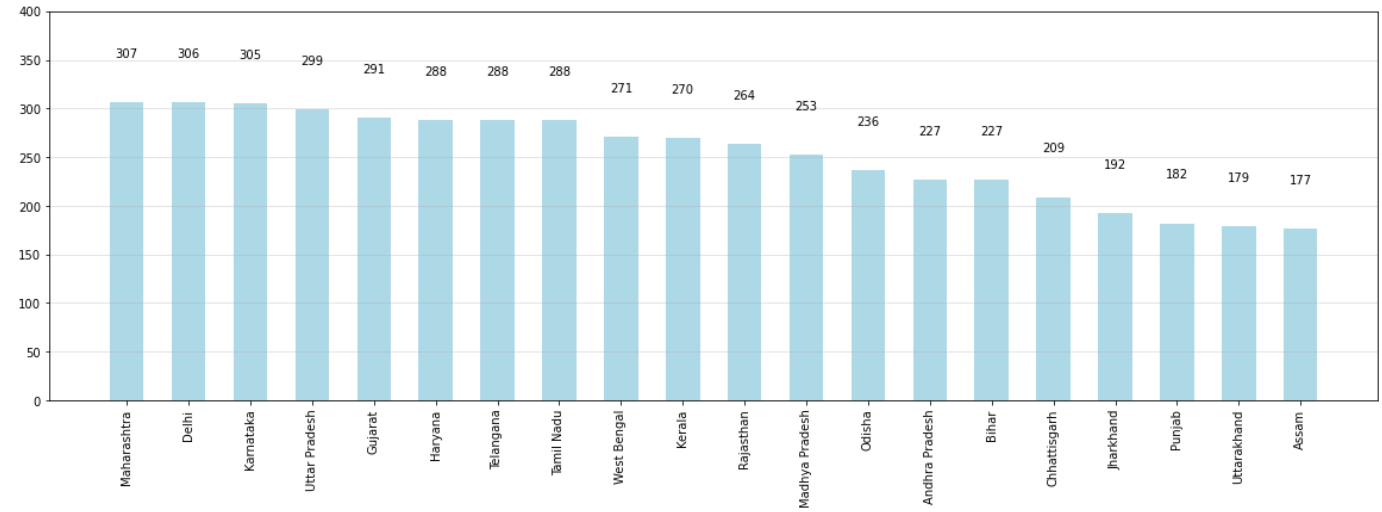
Top 20 Startup Industries from 2016



In [12]:
```
fig, ax = plt.subplots(1,1, figsize=(20, 6))
X = df['State'].value_counts().iloc[:20]
ax.bar(X.index, X, width=0.55,linewidth=0.7, color = 'lightblue')
for i in X.index:
    ax.annotate(f"{X[i]}",xy=(i, X[i] + 50),
                va = 'center', ha='center')
ax.set_ylim(0, 400)
fig.text(0.1, 0.95, "Top 20 States Having maximum Start'ups from 2016", fontsize=15, fon
plt.xticks(rotation=90)
ax.grid(axis='y', linestyle='-', alpha=0.4)
```

Top 20 States Having maximum Start'ups from 2016



In [13]:
```
ds_list=['Internet of Things','AI','Robotics','Analytics','Computer Vision']
ds_df = df[df['Industry'].isin(ds_list)]
```

In [14]:
```
sns.set_style('whitegrid')
sns.catplot(x='Year', hue = 'Industry', kind='count', data=ds_df,palette="Set3", height=
plt.show()
```

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In [ ]:

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