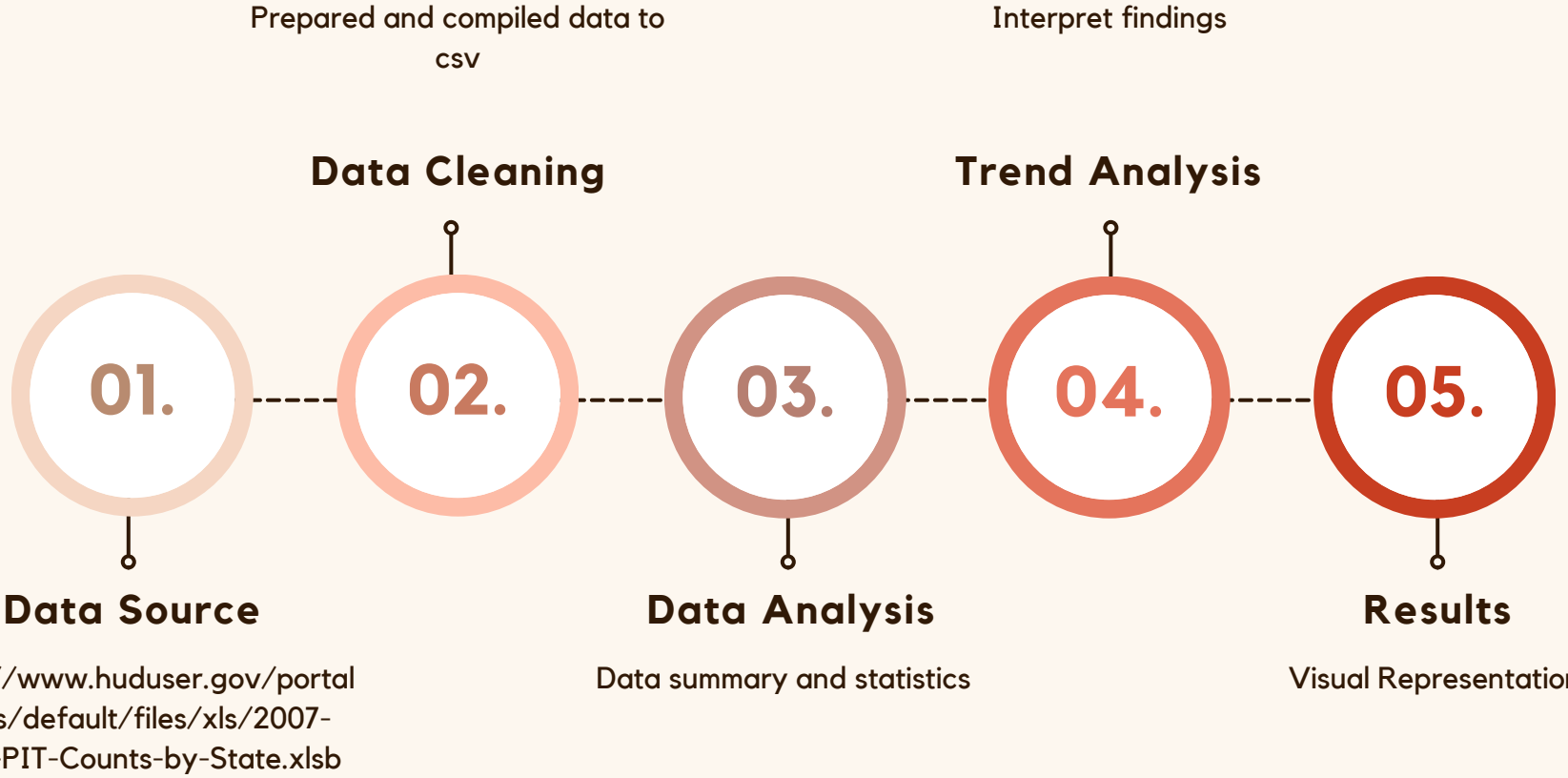
Analyzing Homelessness Trends in 11 Selected States (2013-2023)

DATA WORKFLOW



Summary and Statistics

Using Python's Pandas library....

State Summary Statistics:

State	mean	median	std	min	max
AZ	10337	10007	2295	5460	14237
CA	131918	129972	34306	57468	181399
CO	10447	10028	1481	8544	14439
HI	6372	6458	1424	2490	7921
IL	11135	10798	1723	7958	13425
LA	3914	3305	1433	2131	7373
MA	18619	19029	2012	15079	21237
MS	1479	1352	550	626	2403
ND	929	784	478	541	2069
NM	2837	2746	458	2263	3842
UT	3150	3081	327	2798	3687

Yearly Summary Statistics:

Year	mean	median	std	min	max
2013	17586	6335	33908	2069	118552
2014	17241	6918	32621	1258	113952
2015	17322	7620	33179	1305	115738
2016	17203	7921	33944	923	118142
2017	18018	7220	37993	1089	131532
2018	18028	6530	37573	542	129972
2019	19700	6412	43958	557	151278
2020	20774	6458	46983	541	161548
2021	9692	3565	16415	548	57468
2022	21950	7373	49847	610	171521
2023	23622	6223	52694	784	181399

yearly_stats = yearly_stats.astype(int)

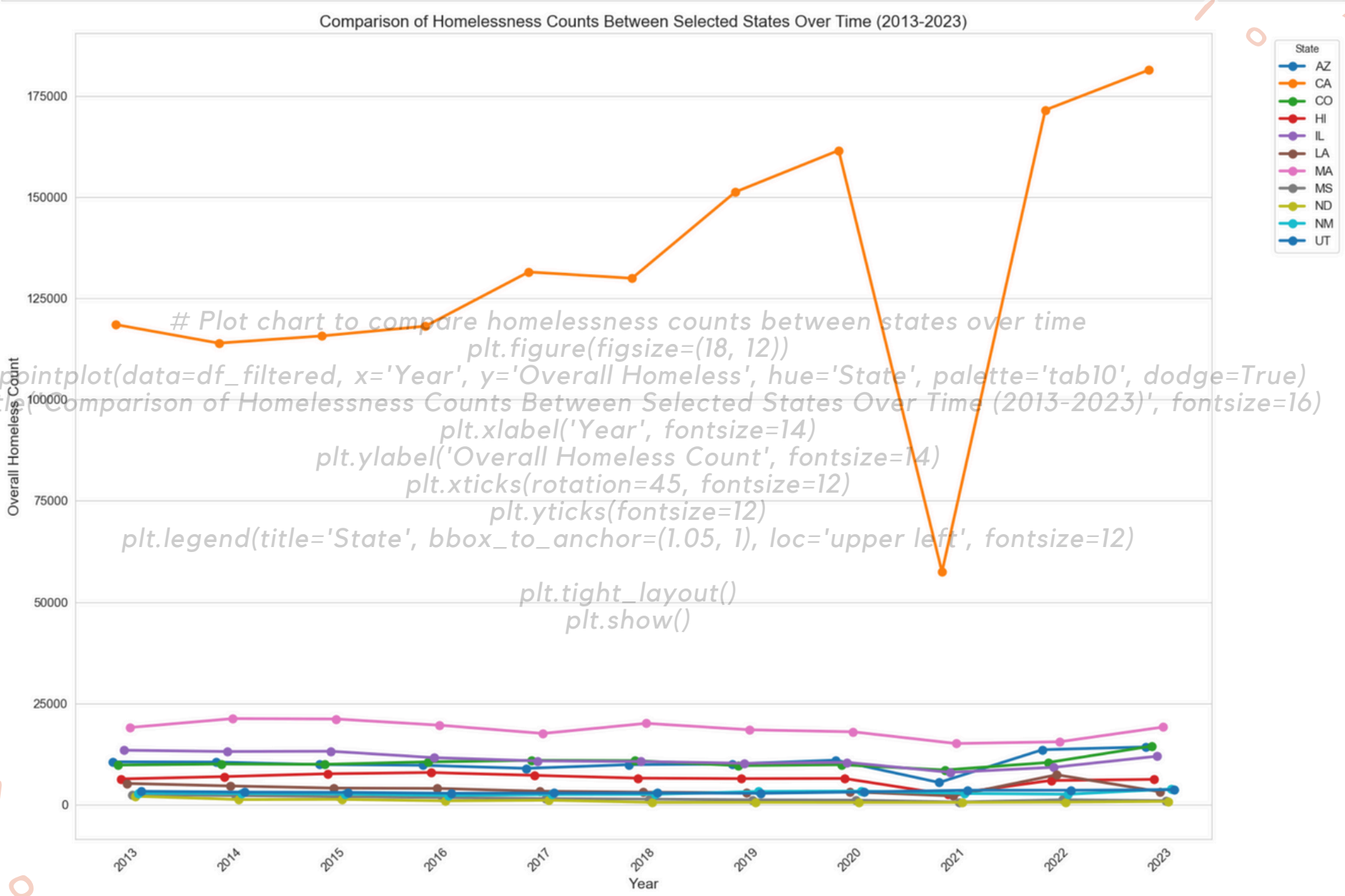
state_stats = state_stats.astype(int)

Homelessness Trends

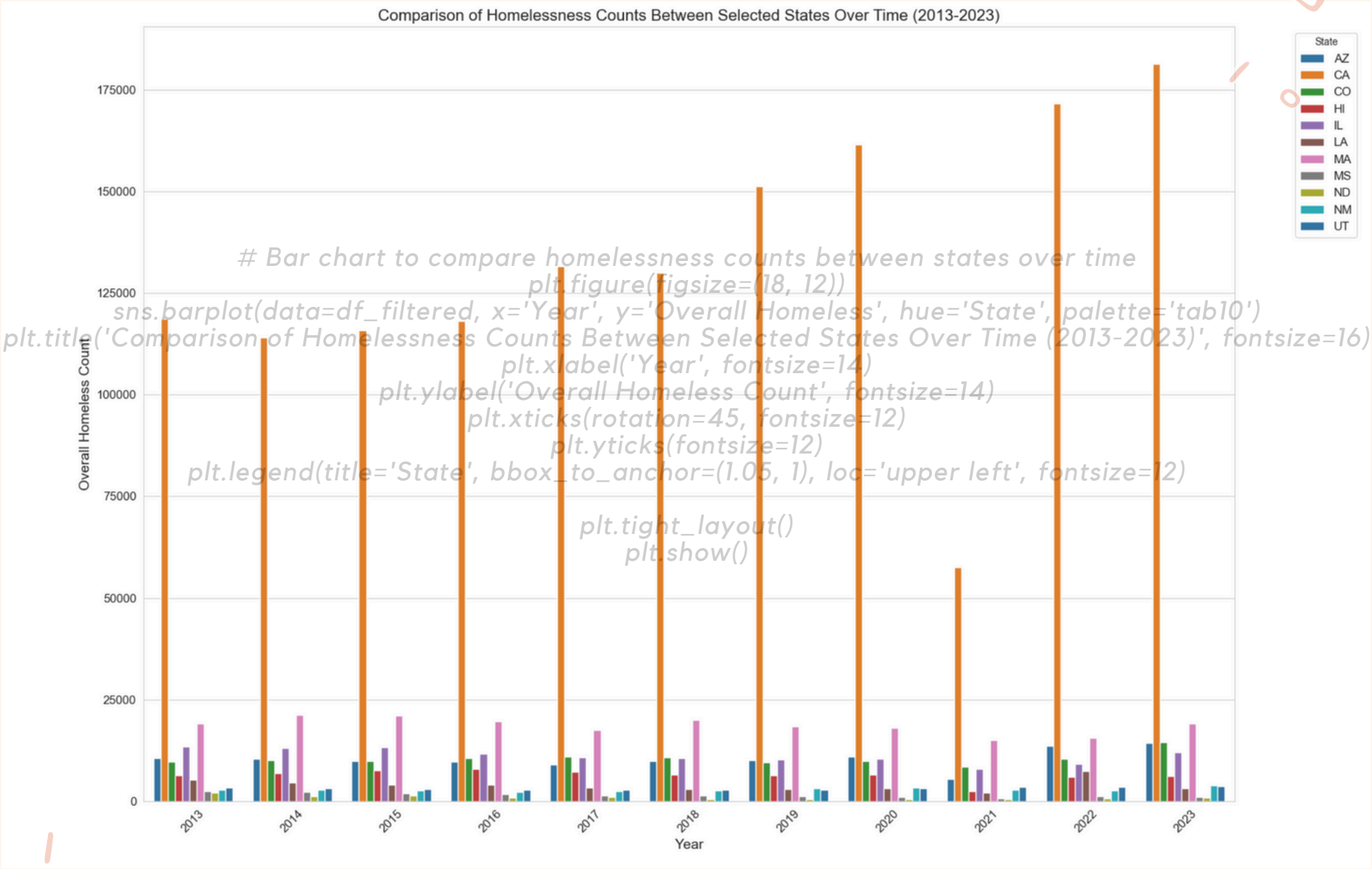
State	AZ	CA	CO	HI	IL	LA	MA	MS	ND	NM	UT
Year											
2013	10562	118552	9754	6335	13425	5226	19029	2403	2069	2819	3277
2014	10495	113952	10028	6918	13107	4606	21237	2226	1258	2746	3081
2015	9896	115738	9953	7620	13177	4081	21135	1983	1305	2629	3025
2016	9707	118142	10550	7921	11590	3994	19608	1738	923	2263	2807
2017	8947	131532	10940	7220	10798	3305	17565	1472	1089	2482	2852
2018	9865	129972	10857	6530	10643	3059	20068	1352	542	2551	2876
2019	10007	151278	9619	6412	10199	2941	18471	1184	557	3241	2798
2020	10979	161548	9846	6458	10431	3173	17975	1107	541	3333	3131
2021	5460	57468	8544	2490	7958	2131	15079	626	548	2747	3565
2022	13553	171521	10397	5967	9212	7373	15507	1196	610	2560	3557
2023	14237	181399	14439	6223	11947	3169	19141	982	784	3842	3687

```
selected_states = ['HI', 'UT', 'CO', 'MA', 'CA', 'LA', 'ND', 'MS', 'IL', 'NM', 'AZ']

df_filtered = df[(df['Year'] >= 2013) & (df['Year'] <= 2023) & (df['State'].isin(selected_states))]
```

Visual Representation




```
# Plot chart to compare homelessness counts between states over time
plt.figure(figsize=(18, 12))
sns.pointplot(data=df_filtered, x='Year', y='Overall Homeless', hue='State', palette='tab10', dodge=True)
plt.title('Comparison of Homelessness Counts Between Selected States Over Time (2013-2023)', fontsize=16)
plt.xlabel('Year', fontsize=14)
plt.ylabel('Overall Homeless Count', fontsize=14)
plt.xticks(rotation=45, fontsize=12)
plt.yticks(fontsize=12)
plt.legend(title='State', bbox_to_anchor=(1.05, 1), loc='upper left', fontsize=12)

plt.tight_layout()
plt.show()
```




```
# Bar chart to compare homelessness counts between states over time
plt.figure(figsize=(18, 12))
sns.barplot(data=df_filtered, x='Year', y='Overall Homeless', hue='State', palette='tab10')
plt.title('Comparison of Homelessness Counts Between Selected States Over Time (2013-2023)', fontsize=16)
plt.xlabel('Year', fontsize=14)
plt.ylabel('Overall Homeless Count', fontsize=14)
plt.xticks(rotation=45, fontsize=12)
plt.yticks(fontsize=12)
plt.legend(title='State', bbox_to_anchor=(1.05, 1), loc='upper left', fontsize=12)

plt.tight_layout()
plt.show()
```