Project Bluecoats - Score Analysis And Visualization

Read Me

📌 **Purpose**

This notebook visualizes the performance progression of the Bluecoats Drum Corps across selected seasons, using caption-level DCI scoring data.

The report aims to identify scoring patterns, highlight major performance shifts, and compare caption scores (**General Effect**, **Visual**, and **Music**) across the seasons. 📊 **Data Source**

- "https://www.dci.org/scores/"
- Contains show-level scoring data for the Bluecoats, including overall scores and individual captions.

Collection & Cleaning DCI.org

- Initial Parsing
- Updating Latest Show Data
- Dataframes Displays

Visualization

- Preparation
- Total Score Graph
- Caption Score Graphs

Future Outlook...

Enjoy!

Author

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```
In [1]:   import requests
          from bs4 import BeautifulSoup
          import pandas as pd
          from pprint import pprint
          import importlib
```

Colletion and Cleaning DCI.org

Inital Parsing

Loops through all the shows documented on dci.org and writes the caption and sub caption scores into a csv file notated by date, location, corp name into a score_by_show&corp.csv

```
In [ ]:   import find_show_info as fds
          importlib.reload(fds)
          fds.scrape_dci_recaps_selenium()
          fds.build_show_score_list()
          fds.build_show_score_df()
```

Updating Lastest Shows

Updates the lastest shows and write it to score_by_show.csv (name slightly different for differentiating purpose).

```
In [ ]:   import find_show_info as fds
          importlib.reload(fds)
          fds.build_lastest_show_score_df()
```

Dataframes

Raw html

```
In [47]:   df_raw = pd.read_csv("all_shows_score_recap.csv")
           pprint(df_raw.iloc[0, 0:3])
```

```
July 25, 2025
July 25, 2025
Nashville, TN
Birmingham, AL
General Effect|General Effect 1|T. Wemhoff|Rep|Perf|TOT|General Effect 2|M. Howard|Rep|Perf|TOT|TOT    Gene
ral Effect|General Effect 1|A. Combites|Re...
Name: 0, dtype: object
```

All corps score at all shows

```
In [44]:   df_all = pd.read_csv("score_by_show.csv")
           display(df_all.iloc[:2,:])
```

	Show Date	Show Location	Corp Name	General Effect - TOT	General Effect - TOT_rank	Visual - TOT	Visual - TOT_rank	Music - TOT	Music - TOT_rank	Sub Total	Sub Total_rank	Total	Total_
0	July 25, 2025	Birmingham, AL	Blue Knights	34.1	1	25.65	1	25.9	1	85.650	1	85.650	
1	July 25, 2025	Birmingham, AL	Spirit of Atlanta	32.9	2	24.75	2	25.2	2	82.850	2	82.850	

All Bluecoats shows since 2013

```
In [48]:   import find_show_info as fds
           importlib.reload(fds)
           fds.find_bluecoats()
           df_bloo = pd.read_csv("bluecoats_shows.csv")
           display(df_bloo.iloc[:2,:])
```

	Unnamed: 0	Show Date	Show Location	Corp Name	General Effect - TOT	General Effect - TOT_rank	Visual - TOT	Visual - TOT_rank	Music - TOT	Music - TOT_rank	Sub Total	Sub Total_rank	T
0	0	July 20, 2025	Bedford, TX	Bluecoats	37.00	1	28.0	1	27.950	1	92.950	1	92.
1	12	July 19, 2025	San Antonio, TX	Bluecoats	37.35	1	27.8	1	27.675	3	92.825	2	92

Visualization

Preparation

Bluecoats color from media pictures

```
In [6]:  import graph_scores as gs
         importlib.reload(gs)
         gs.show_color()
```


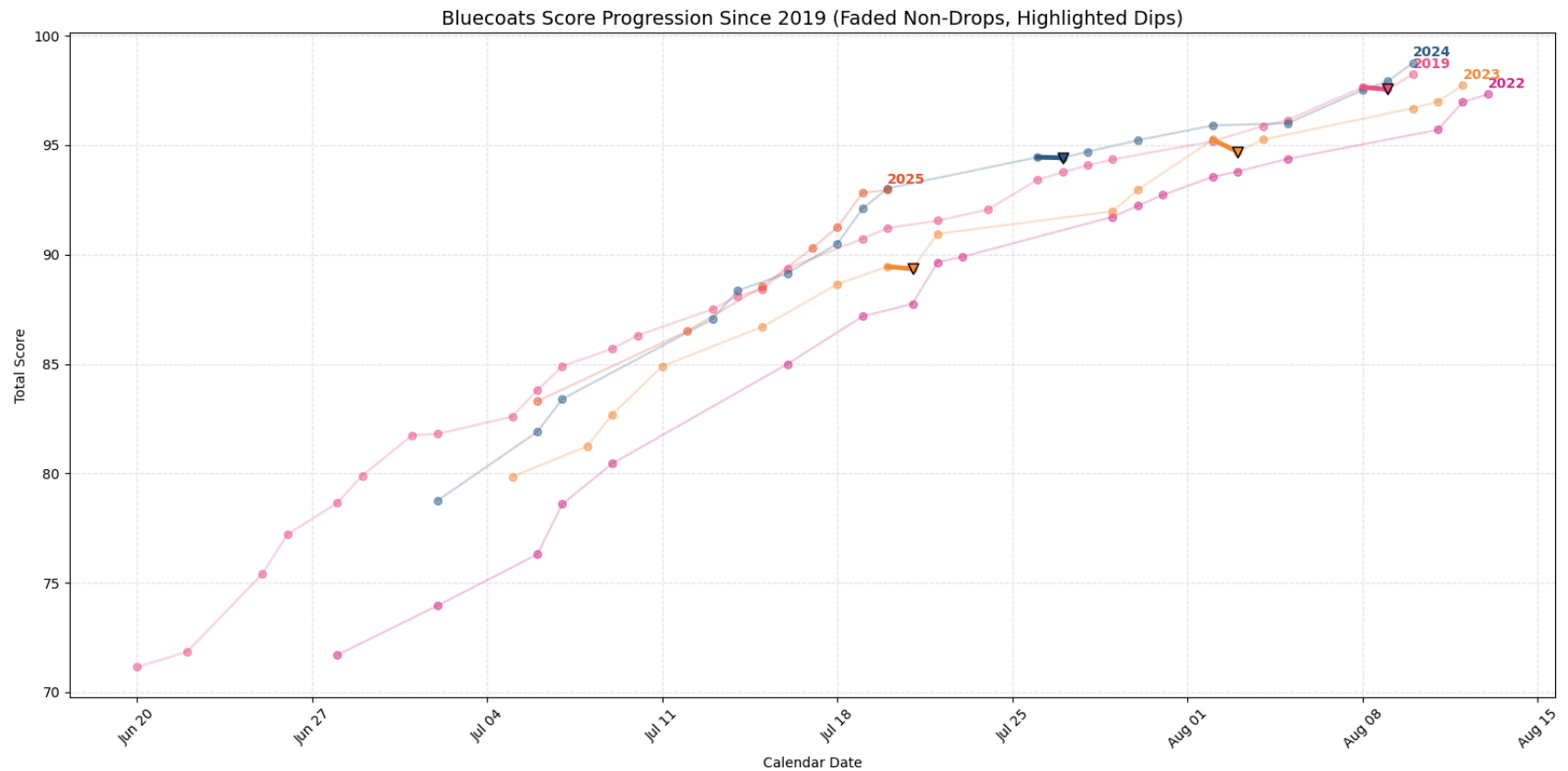Full Color Palette Preview
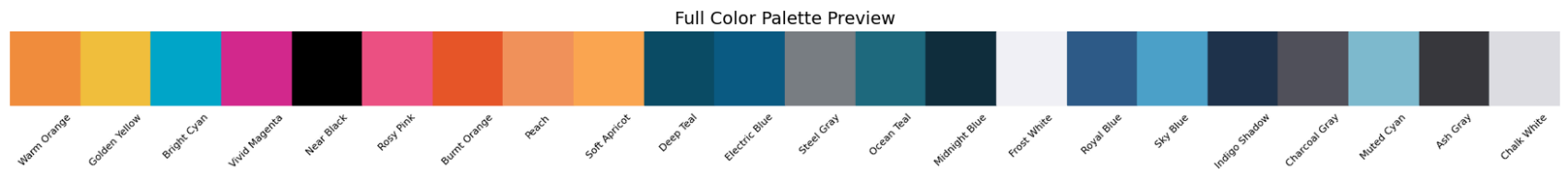
Total Score Graphs

Bluecoat season score progression since 2013

```
In [13]:  import graph_scores as gs
          importlib.reload(gs)
          gs.bluecoats_season_trend()
```

Bluecoats Score Progression by Calendar Date (Overlapping Years)
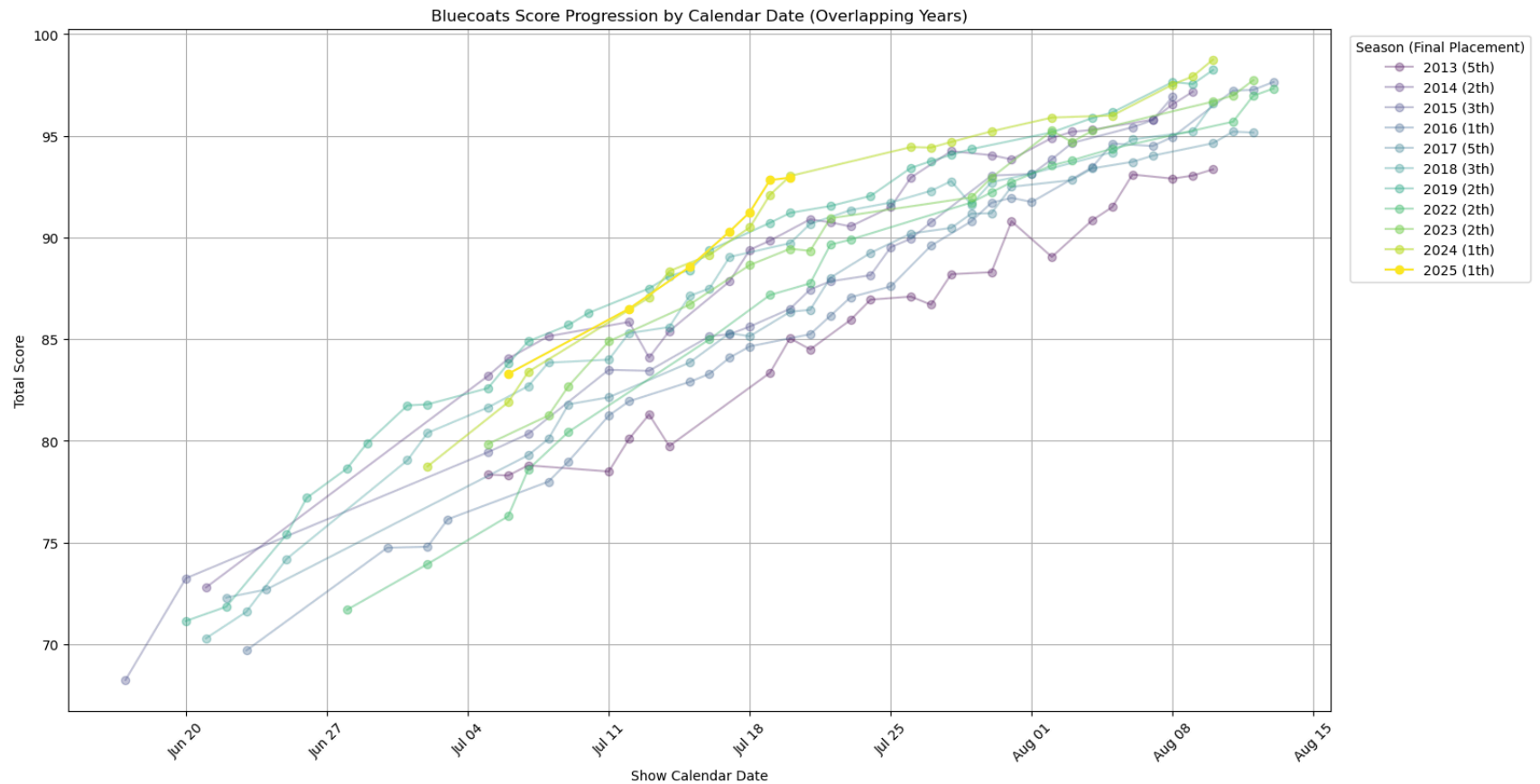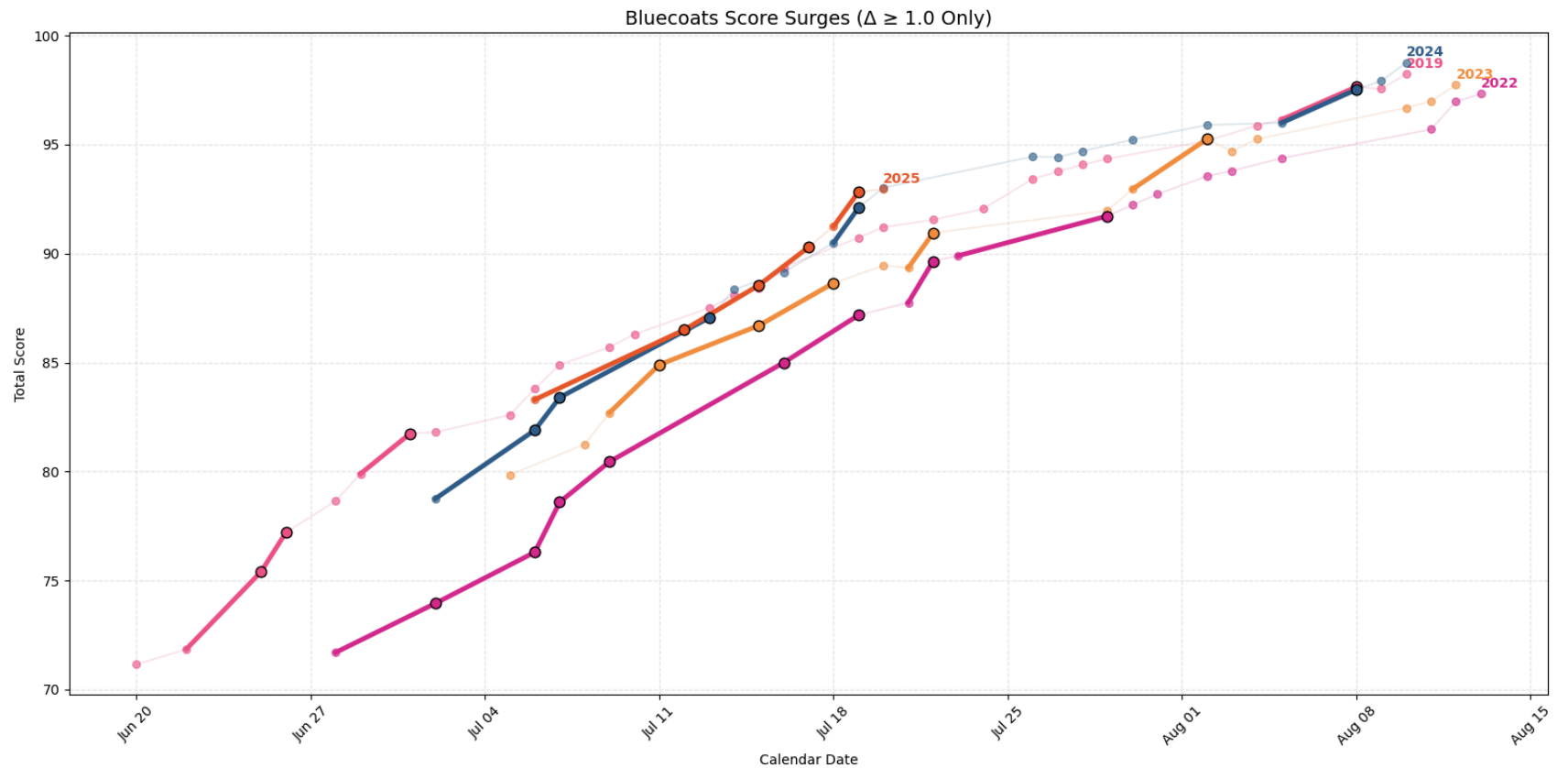

Bluecoats seasons since 2019 highlighting score drops

```
In [40]: import graph_scores as gs
         importlib.reload(gs)
         gs.bluecoats_season_trend_highlight_drops()
```

Bluecoats seasons since 2019 highlighting score increase by at least 1.5

```
In [39]:  import graph_scores as gs
          importlib.reload(gs)
          gs.bluecoats_season_trend_highlight_improvements()
```

Bluecoats season 2025 and past championship seasons.

```
In [33]:  import graph_scores as gs
          importlib.reload(gs)
          gs.bluecoats_champ_seasons_plot()
```

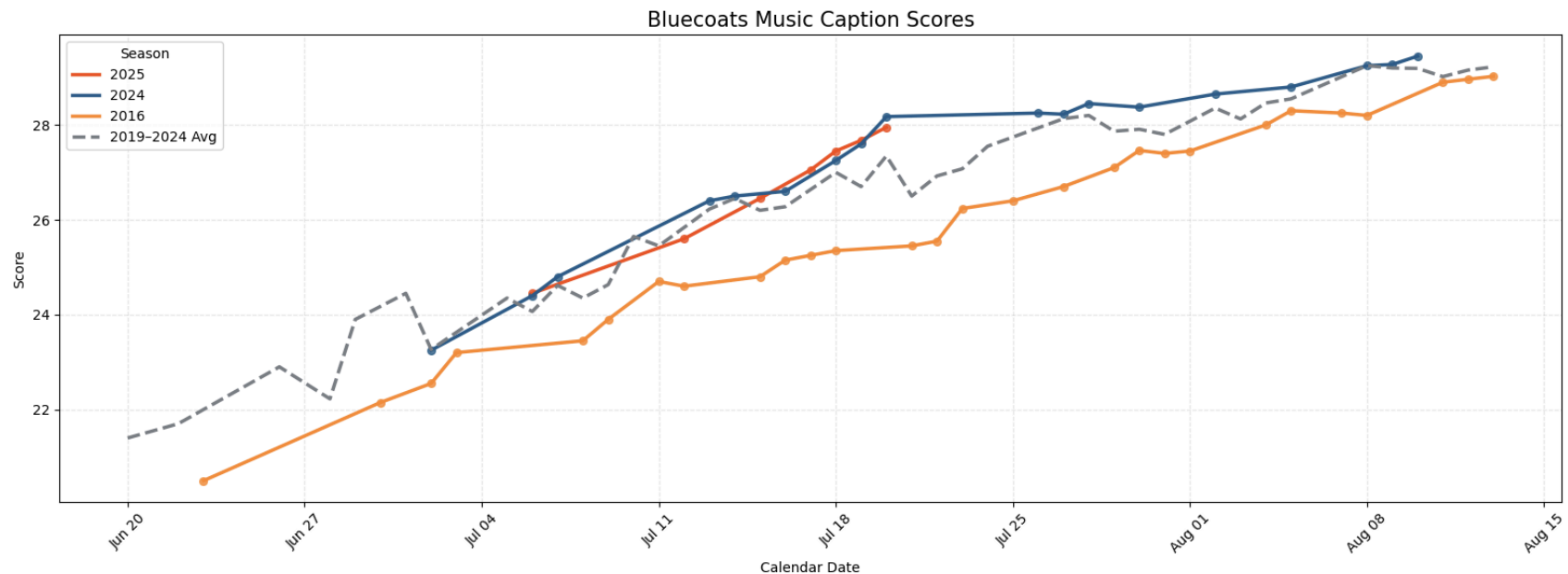Bluecoats Score Progression: 2016 vs 2024 vs 2025
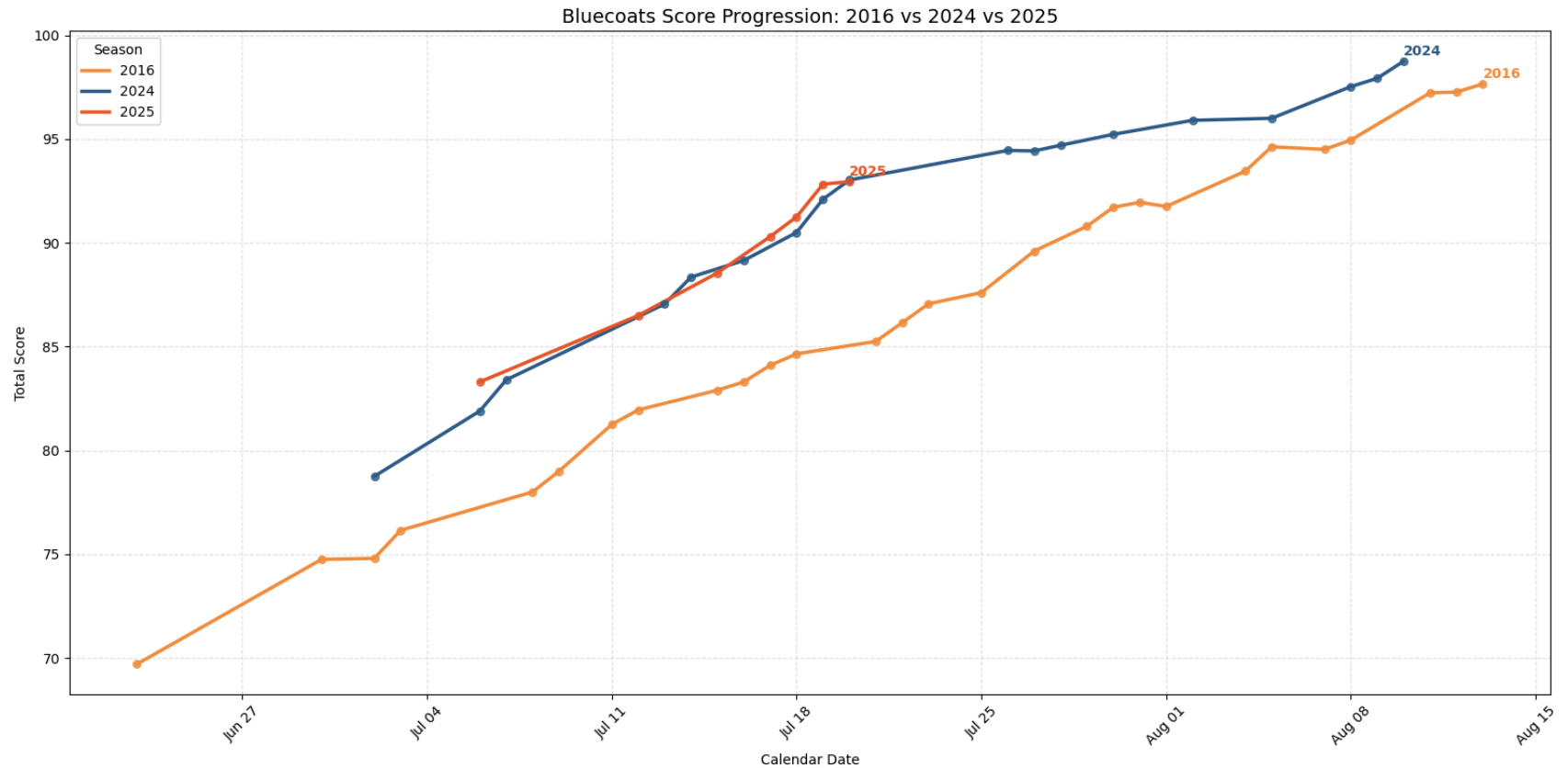
Caption Score Graphs

Bluecoats caption score trend with year 2025, 2024, 2016, and average of 2019-2024

```
In [38]:  import graph_scores as gs
          importlib.reload(gs)
          gs.bluecoats_caption_score_trend()
```

Bluecoats General Effect Caption Scores

Bluecoats Visual Caption Scores

Bluecoats Music Caption Scores
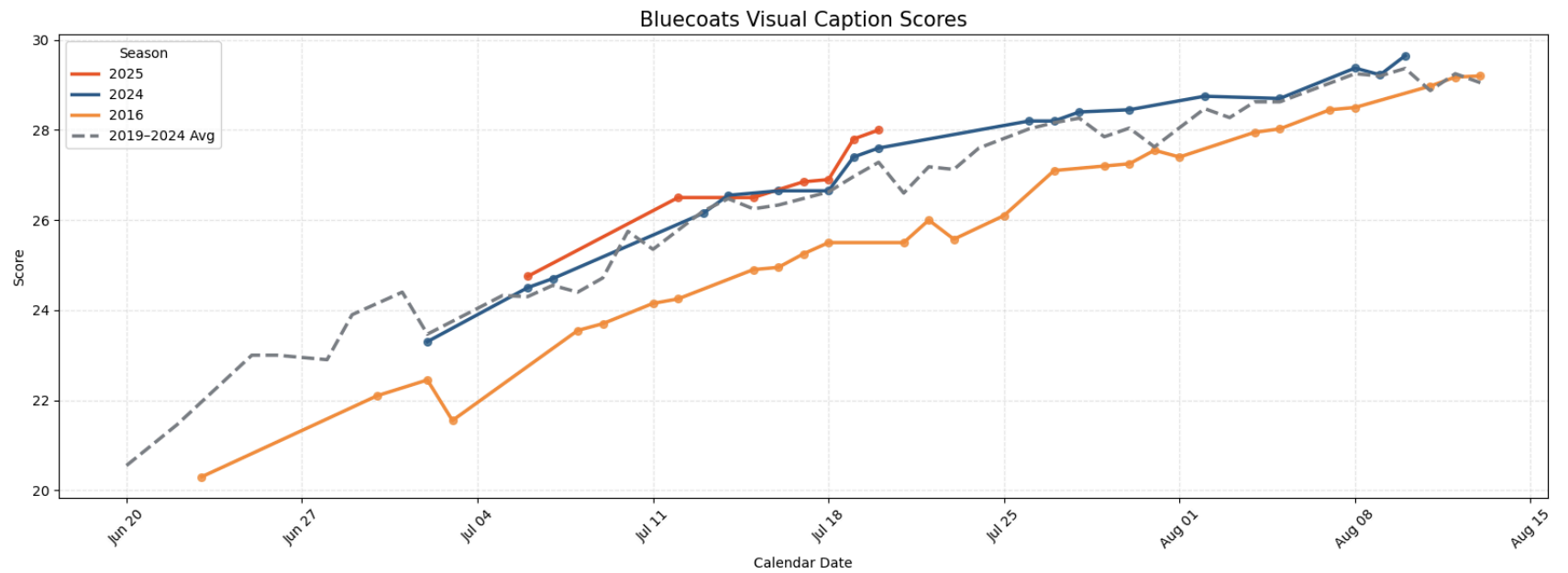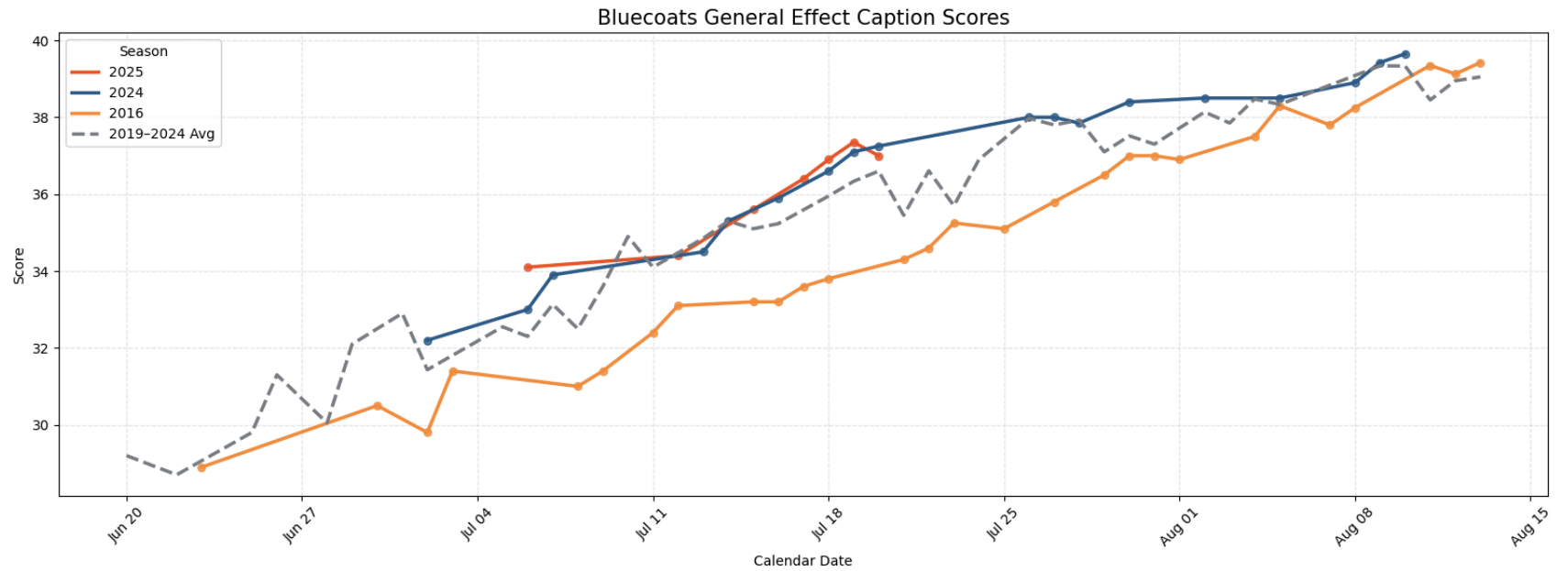
Future Outlooks & Expansion Ideas

- Analyze judging trends by **matching judge names to caption scores**, identifying potential judge-specific scoring patterns or biases.
- Determine Bluecoats' **caption rankings in finals** across multiple years to reveal recurring **strengths and weaknesses**.
- If data permits, visualize operational season metrics such as:
  - **Spring training workload**: total and average rehearsal hours per day.
  - **Tour logistics**: total/average miles traveled, bus time, and housing/floor time.
  - **Tour rehearsal intensity**: rehearsal hours per day while on tour.
- Compare **caption score trajectories** of Bluecoats with peer corps (e.g., BD, Crown) for performance trend benchmarking.
- Analyze **score volatility** over a season to identify stability vs. inconsistency.
- Examine the **relationship between performance order and score**, especially at regionals and finals.
- Track **individual caption improvements** post-major show rewrites (if timestamped notes are available).