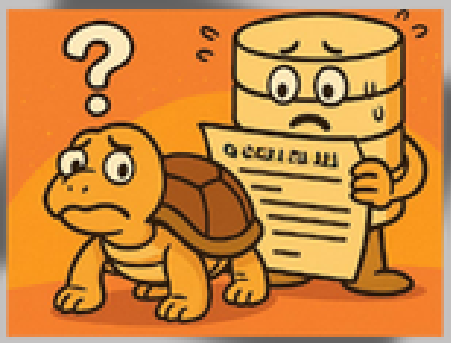
From Data to Social Media

How to Create a Football Visualization from Scratch

Sara Bentelli

1. Introduction

“This guide helps you go from a raw dataset to a beautiful visualization using Python. Perfect for beginners who want to share meaningful insights on social media.”



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2. Step-by-Step Breakdown

1. Load Your Data

CSV file with event data from Wyscout, StatsBomb, etc.

Make sure to check your columns!

```python
import pandas as pd

# Load Wyscout-style CSV
data = pd.read_csv("ali_abdi.csv")

# Filter relevant columns
data = data[['x', 'y', 'type', 'outcomeType', 'endX', 'endY', 'isShot', 'isGoal']]
```

PS. Exploring the types of events helps you decide what to visualize — passes, fouls, shots, defensive actions, etc. Think like a coach or analyst!

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2. Choose what you want to show

For example:
I want to show Ali Abdi's shooting and defensive actions.

```python
# Shots
shots = data[data['isShot'] == True]

# Defensive actions
def_events = ['Tackle', 'Clearance', 'Aerial', 'BallRecovery', 'BlockedPass', 'Save', 'Interceptio
def_data = data[data['type'].isin(def_events)]
```

This is the most important step: choose wisely the actions that are relevant to your story (e.g., only goals, tackles, or passes in the final third).

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2. Step-by-Step Breakdown

3. Structuring data for vizz

Here we prepare each type of shot (goal, missed, saved)

```python
goals = data[(data['isShot'] == True) & (data['type'] == 'Goal')]
missed = data[(data['isShot'] == True) & (data['type'] == 'MissedShot')]
saved = data[(data['isShot'] == True) & (data['type'] == 'SavedShot')]
```

2. Step-by-Step Breakdown

4. Create the vizZ

```python
from mplsoccer import VerticalPitch
import matplotlib.pyplot as plt

pitch = VerticalPitch(pitch_type='wyscout', half=True, pitch_color='white', line_color='black')
fig, ax = pitch.draw()

pitch.scatter(goals['x'], goals['y'], ax=ax, color='green', s=150, marker='*', label='Goals')
pitch.scatter(saved['x'], saved['y'], ax=ax, color='orange', s=100, label='Saved')
pitch.scatter(missed['x'], missed['y'], ax=ax, color='red', marker='x', s=100, label='Missed')

ax.legend()
plt.title("Ali Abdi - Shots Map")
```

Now your data comes to life! Customize size, color, and markers to highlight the insight. Add context to make your visuals more compelling

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2. Step-by-Step Breakdown

5. <u>Add a touch of design</u>

🎨 Use a cool font (FontManager)

🔍 Add a clean title and caption

📏 Adjust point sizes for Twitter/Instagram

A clear design improves readability and makes your work more appealing for social media. Think about aesthetics and clarity.

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6. Save the visualization

After building your plot with Python, don't forget to save it!

```python
fig.set_facecolor('#F5F5F5')  # Optional background color
plt.savefig("ali_abdi_shots.png", dpi=300, bbox_inches='tight')
```

Save in high resolution so your graphic looks clean when shared online or in presentations.

3. Key Tips

- ✓ Keep your code clean and modular
- ✓ Focus on one type of insight per visual
- ✓ Use colors and size to guide attention
- ✓ Export high-resolution files for social media
- ✓ Always mention the source of data

Challenge Time!

You've seen how to turn raw data into powerful visualizations.

Now it's your turn!

🧠 Create a heatmap of Ali Abdi's defensive actions using Python and mplsoccer.

✨ Want to shine?

Post your work on LinkedIn and tag me — I'll share some of your visualizations on my profile and celebrate your progress with the community!

📎 Need help?

Check the tutorial notebook on GitHub to see how to complete the challenge step by step. Let's show the world what new football analysts can do!

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Thank you for reading!

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Follow me for more football data analysis insights.