✓ **Milestone 3** | ESPN's 10 Years of Top 10

INTRODUCTION: In this SkillBuilder, you've learned how to create three of the most fundamental types of charts: bar charts, line charts, and histograms. Along with creating these charts, you learned how to create calculated fields in Tableau, which lets you combine existing features into new ones, leading to richer analyses.

In this Milestone, you'll be practicing your Tableau skills with a dataset featuring ten years of the top 10 highest-paid athletes in the world, from 2012 to 2022.

HOW IT WORKS: Follow the prompts in the questions below to investigate your data. Post your answers in the provided boxes: the **yellow boxes** for the queries you write, **purple boxes** for visualizations and **blue boxes** for text-based answers. When you're done, export your document as a pdf file and submit it on the Milestone page – see instructions for creating a PDF at the end of the Milestone.

RESOURCES: If you need hints on the Milestone or are feeling stuck, there are multiple ways of getting help. Attend Drop-In Hours to work on these problems with your peers, or reach out to the HelpHub if you have questions. Good luck!

PROMPT: You've been hired by ESPN to contribute to their Ten Years of Top Ten project. In particular, your job is to analyze, summarize, and visualize trends in the past ten years of the top ten highest-paid athletes. In the visualizations you create, never forget to add titles (maybe even subtitles!) to bring home your analysis.

— Data Set **Description**

The Forbes list of highest paid athletes (`forbes.highest_paid_athletes`) consists of ten years of the top ten highest-paid athletes in the world, from 2012 through 2022. Here are variables that you'll be using in this Milestone:

- **year** - year of earnings, defined by 12 months leading to May 1st
- **rank** - An athlete's rank (1–10) for a given year, based on their total earnings
- **name** - Athlete's name
- **sport** - Athlete's sport
- **country** - Country the athlete represents
- **total_earnings_mil** - Total annual earnings for a given athlete in a given year, in millions $USD
- **on_field_earnings_mil** - On-field earnings figures include prize money, salaries and bonuses for a given athlete in a given year, in millions $USD
- **off_field_earnings_mil** - Off-field earnings figures are an estimate of sponsorship deals, appearance fees, and memorabilia and licensing income for a given athlete in a given year, in millions $USD

— **Task 1:** Query the Data

A. Write a query that returns all the columns in the dataset (`forbes.highest_paid_athletes`). Copy and paste your query into the box below.
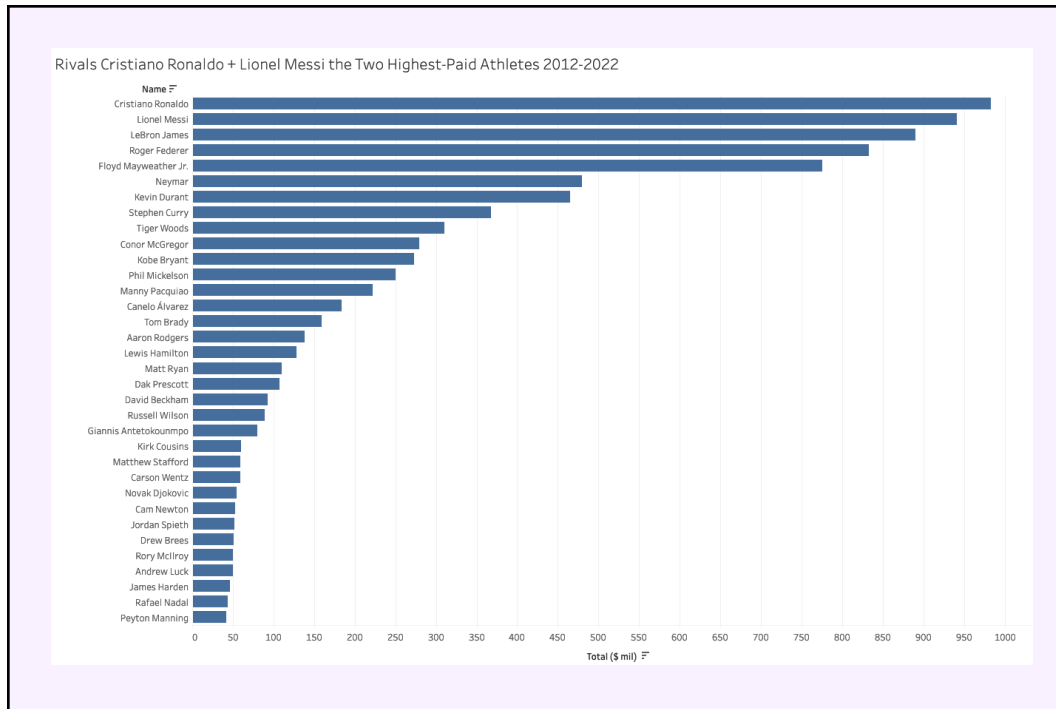
```
SELECT
    *
FROM forbes.highest_paid_athletes
```

B. While you'd typically download the output of your query as a .csv file and upload this .csv file to a Tableau workbook, that's already been done for you! **Click this link to navigate to the workbook you'll use to complete the remainder of this Milestone.** Once you've published your Tableau Workbook in the folder named Upload Workbooks Here, paste the Share Link in the box below.

Here's a link to download this workbook. You'll need to upload it toPersonal Practice folder in Tableau Cloud.

— **Task 2:** Who are the highest paid athletes?

On Sheet 1 of your workbook, create a bar chart to show the total amount earned by every athlete to ever make the top ten list of highest-paid athletes in the world. Which athlete has made the most money in the years they've made the list? Paste your visualization into the blue box, and the name of the highest-paid athlete in the yellow box. HINT: Your visualization might look like this visualization.

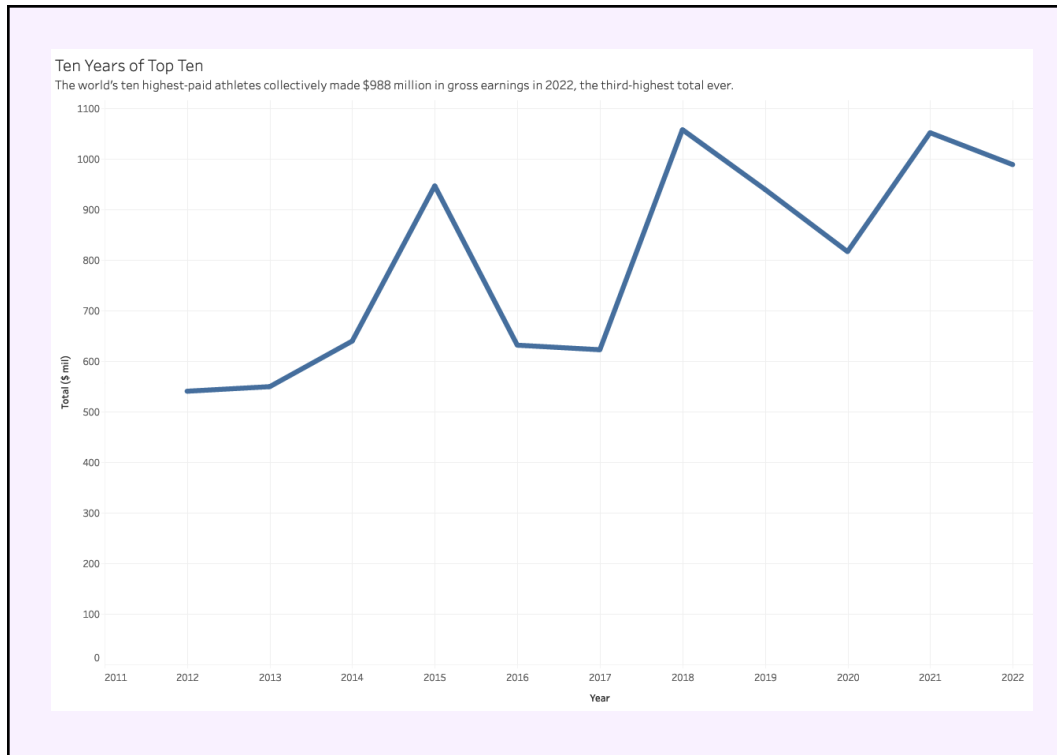Rivals Cristiano Ronaldo + Lionel Messi the Two Highest-Paid Athletes 2012-2022

Cristiano Ronaldo leads the pack of highest-paid athletes bringing in $998 million during the years in which he made the Top 10 list. His rival Lionel Messi is just behind him (earning $941 million).

— Task 3: Ten Years of Top Ten

On Sheet 2 of your workbook, create a line chart to show the total amount of gross money earned by the top ten highest-paid athletes in the world each year. Comment on the general trend in earnings by the top ten highest-paid athletes. In what years are the top athletes earning the most? In what years are they earning the least? Paste your visualization and write your answer below.
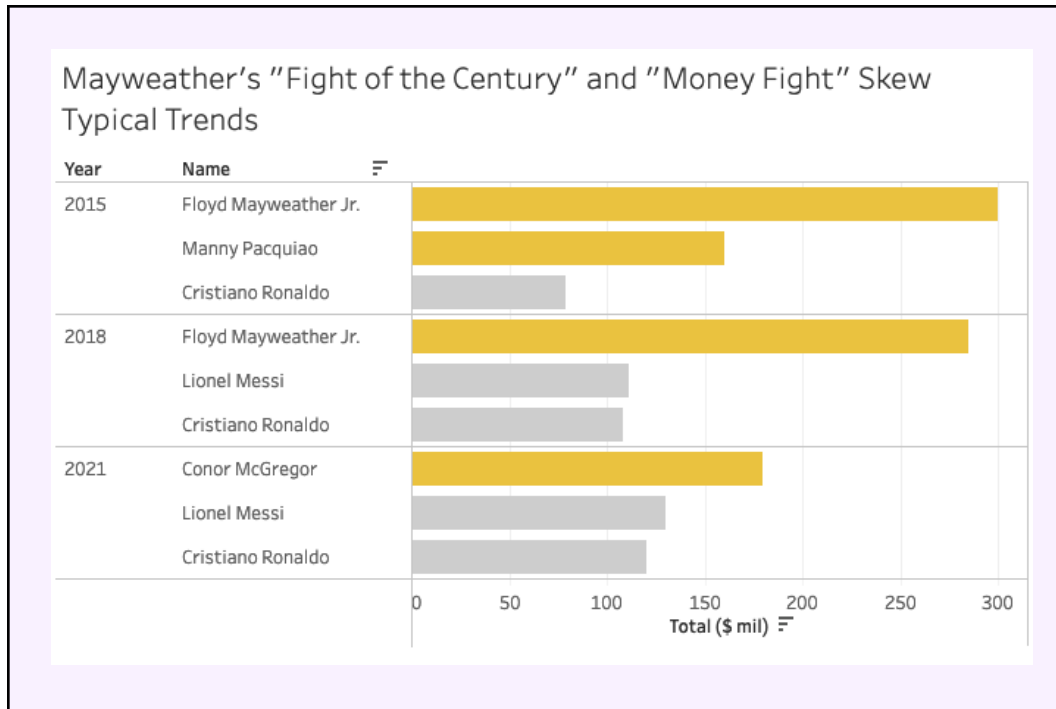
Ten Years of Top Ten
The world's ten highest-paid athletes collectively made $988 million in gross earnings in 2022, the third-highest total ever.

There is a general increase in the total amount of money earned by the world's ten highest-paid athletes. Collectively, they raked in a staggering $988 million in gross earnings in 2022, the third-highest total ever, behind 2021's $1.05 billion and the $1.06 billion total of 2018.

— Task 4: Securing a Fortune in One Night of Work

Let's investigate the peaks in cumulative earnings seen in 2015, 2018, and 2021.

A. On Sheet 3, create a bar chart that shows for only the top 3 highest-paid athletes in the years 2015, 2018, and 2021 their total earnings. HINT: you'll use both rank and year in your filter. Paste your visualization below.

Mayweather's "Fight of the Century" and "Money Fight" Skew Typical Trends

B. Which athletes are ranked number 1 in 2015, 2018, and 2021? In what sport do they compete?

Boxers Floyd Mayweather and Conor McGregor are in the number-one spot. Incredibly, Mayweather's 2015 earnings are almost double those of second-place athlete Manny Pacquiao and Mayweather's 2018 earnings are about 2.5 times those of second-place athlete Lionel Messi.
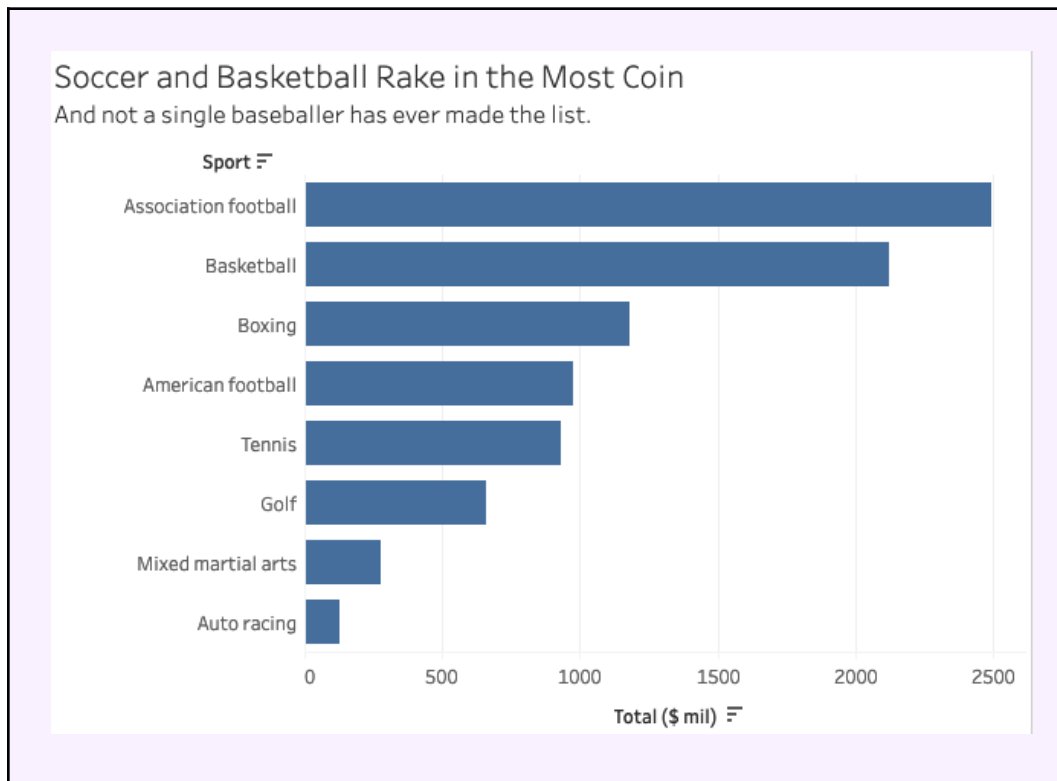
A. What events occurred in 2015 and 2018 that led to the top earner making his millions? If you don't know, use the internet to help you find the answer!

In 2015 Floyd Mayweather Jr. vs. Manny Pacquiao was dubbed the "Fight of the Century" and the "Battle for Greatness" attributing to both Mayweather and Pacquiao topping the charts. In 2018 Floyd Mayweather Jr. vs. Conor McGregor was dubbed "The Money Fight" and "The Biggest Fight in Combat Sports History." Sadly (for him), McGregor didn't make the top 3, but is #4 on 2018's list of highest-paid athletes! His year to top the charts came later, in 2021.

C. LevelUp. Let's make this visualization really pop. Create a calculated field called is-boxing that returns "Boxing" if the sport is Boxing and otherwise returns "Other". Add this calculated field to Color in the Marks of your visualization, and edit the colors so that "Boxing" is emphasized and "Other" is not.
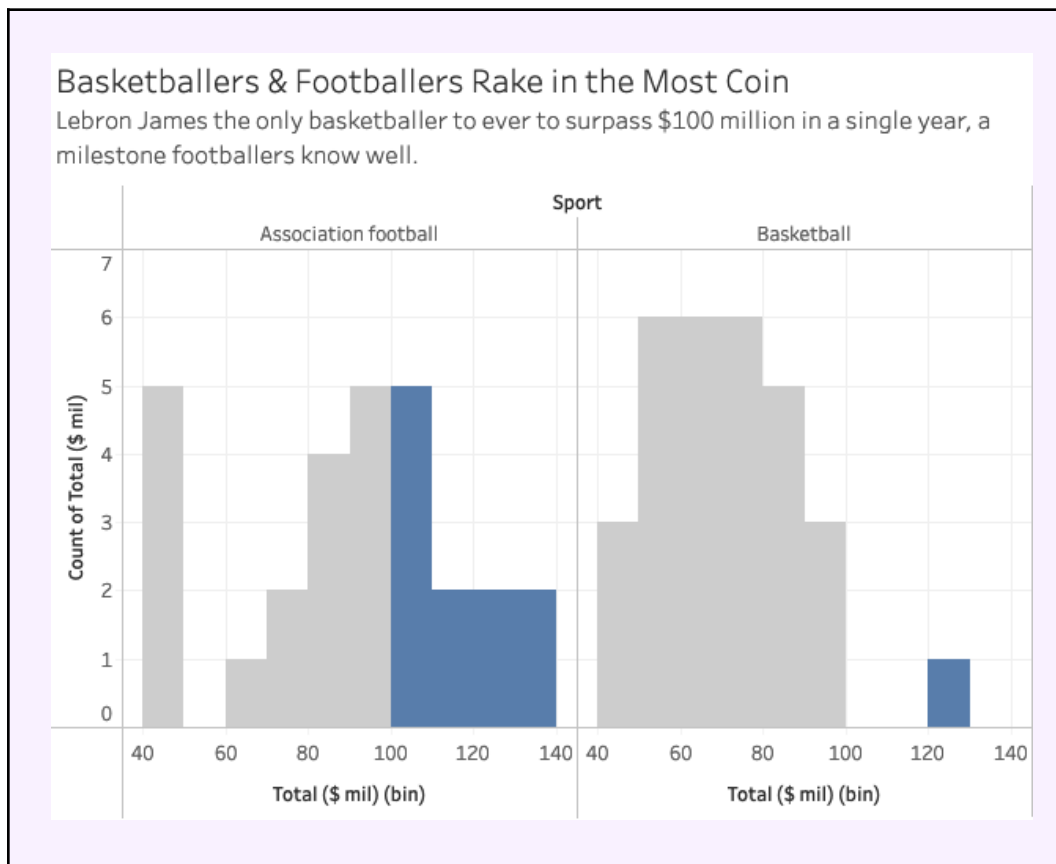
— Task 5: Footballers & Basketballers

A. On Sheet 4, create a bar graph to show the total amount of money earned between 2012 and 2022 in each sport category. What are the two highest-paid sports? Paste your visualization and write your answers below.

Soccer and Basketball Rake in the Most Coin
And not a single baseballer has ever made the list.

Sport

Association football	
Basketball	
Boxing	
American football	
Tennis	
Golf	
Mixed martial arts	
Auto racing	

0   500   1000   1500   2000   2500

Total ($ mil)

Unsurprisingly, association football (AKA soccer) and basketball rake in the most money, with athletes from both categories collectively earning north of $4.6 billion in the past two decades.
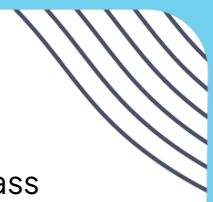
B. On Sheet 5, create a histogram of the total annual earnings. Use a bin size of 10. Add sport to the columns and filter so that you see only the distribution of total earnings for footballers and basketballers side-by-side. Describe the difference in distribution of total earnings between footballers and basketballers. Paste your visualization and write your answer below.

Basketballers & Footballers Rake in the Most Coin
Lebron James the only basketballer to ever to surpass $100 million in a single year, a milestone footballers know well.

There is only one basketballer (Lebron James) to ever surpass earning $100 million in a single year, but that is a milestone footballers have achieved 11 times (Lionel Messi and Cristiano Ronaldo 5 times, each!). This is especially surprising when considering it is seemingly harder to get into the NBA but the earning potential in soccer is much, much higher.

Note: You do not need to have the blue color here. That is for the LevelUp solution.

C. **LevelUp**. You might notice that there is only one basketballer to ever surpass earning $100 million in a single year, but that this is a milestone 11 footballers have achieved. Create a calculated field called `100 million` that returns TRUE if the total earnings is greater than $100 million and FALSE otherwise. Add this calculated field to Color in the Marks of your visualization, and edit the colors so that the number of times the $100 million threshold has been exceeded is highlighted.

— Submission

Great work completing this Milestone! To submit your completed Milestone, you will need to download / export this document as a PDF and then upload it to the Milestone submission page. You can find the option to download as a PDF from the File menu in the upper-left corner of the Google Doc interface.