



SPORTS DATA ANALYTICS

Sports Data Analytics is the collection and study of sports data to:

- ENHANCE player performance and prevent injury
- INFORM recruiting or sports broadcasting
- INCREASE tickets sales and team revenue
- ACHIEVE desired targets

[Why a career in Sports Data Analytics?](#) Well, according to the U.S. Bureau Labor Statistics, the potential for growth in this career is quite significant. Check out these statistics:

\$93K
median salary

33%
job outlook
through 2030

\$4.5B
expected market
growth by 2025

To understand the dynamics of this career and develop your knowledge and skills, we encourage you to fully engage with this expedition's resources and activities and take charge of your learning. You will have the opportunity to:



REFLECT on an industry expert's video and your future aspirations. Be sure to reflect throughout the expedition.



STRETCH your knowledge and skills



INNOVATE through collecting and analyzing data and completing a project you're passionate about and solves a problem.



SHOWCASE your findings to an audience in a powerful way.

Meet Chris Rodriguez, the Director of Baseball Operations for Jacksonville University, an NCAA Division I team. He handles daily operations, as well as data, analytics, and technologies to aid player development. He also served in the Arizona Diamondbacks organization in technology, scouting, and analysis, along with developing pitch design protocols for their minor league players.



As you reflect on Chris's video, think deeply about these questions:

- What excites you about sports or sports performance?
- What are your skills or traits that would help you succeed in a career in sports data and analytics?
- What about Chris's work do you see yourself doing in the future?
- What else would you like to learn about sports data and analytics?
- What are your plans to stretch your learning and skills?



Dive into these resources to expand your learning and skills:

- Discover [how data transformed the NBA](#).
- Learn more about [sports data analytics through Hevo](#).
- Research current [data-gathering technologies and data visualization tools](#) to track your favorite player's or team's performance.
- Get inspired by [Tiffany Kelly, a STEM leader, and the first black woman to join ESPN's analytic team](#).
- Consider how [data tracking of athletes can test ethical boundaries](#), and practice empathy as you collect and analyze data.
- Check out the [Speed Needed in Softball](#), an archived video from ESPN's Sports Science series, to discover how data inform science.
- Explore how sports tracking technology can mitigate racially coded language in [Soccer Looks Different When You Can't See Who's Playing](#).
- Investigate college and career data:
 - [10 best colleges for sports analysts](#)
 - [how to become a sports data analyst](#)
 - [top sports data analytics companies](#).

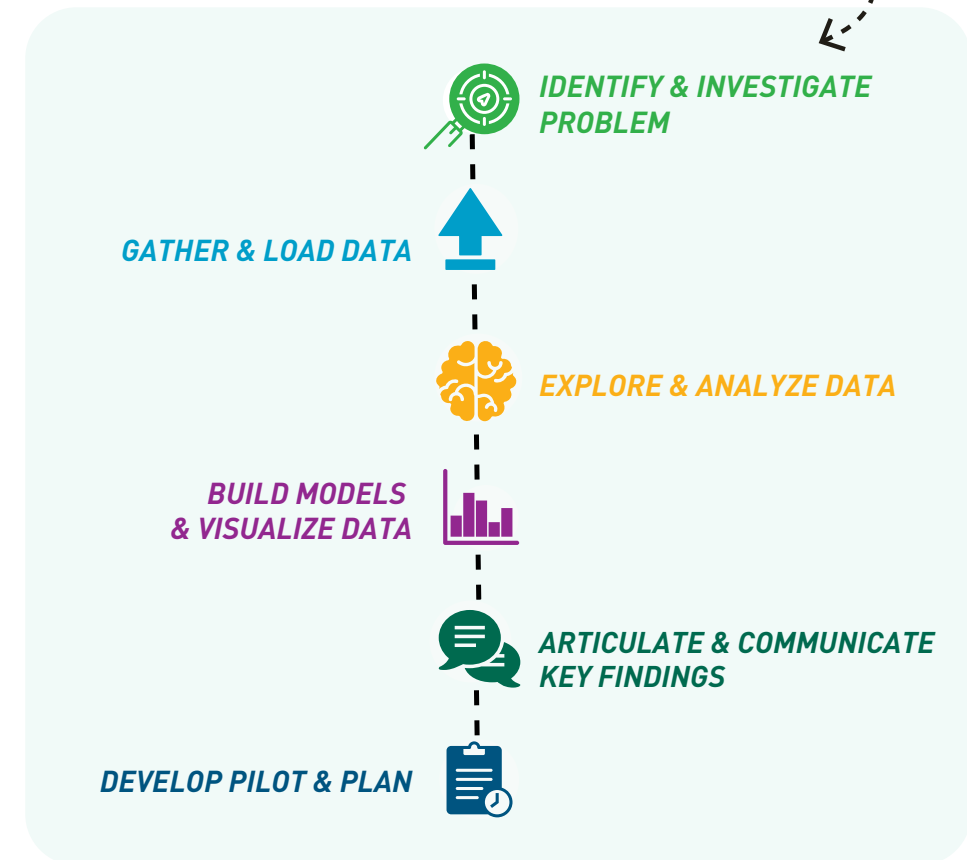


We encourage you to continue researching this topic and curate a list of resources that feeds your curiosity, learning, and passion around Sports Data Analytics.



It's time to think about what you would like to investigate and create:

- On the next two pages, we provide choice boards with sports data analytics' project ideas and ways to showcase your data, findings, and learning.
- Reflect on what excites you about sports, who your favorite athletes are, or what fuels your interest. Then, as you inquire and innovate, follow this process for data analysis:



Adapted from: [The Life Cycle Phases of Data Analysis](#)



From the choice board below, select a project that you are passionate about or that relates to a problem you want to investigate or solve:

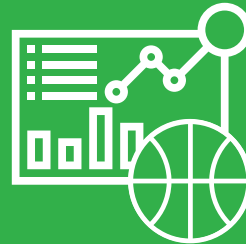
Choice 1: Make the case for your favorite athlete to be inducted into their sport's Hall of Fame using performance data. Analyze existing free data sets and create compelling visuals of the data using software of your choice.

Choice 2: Create a dream team to represent your favorite sport. Collect and gather player stats and analyze them using data science and machine learning tools. For an advanced-level project, create two teams, simulate a game or match between them, and determine which team would win.

Choice 3: Download (or print) a layout of your favorite sport's playing field or court, create a heat map (tally) indicating where most shots or big plays occur over the course of 2-3 games, then analyze for patterns. Create a visual of your data and articulate your findings.

Note: If you would like to extend this project to include coding, create a shooting chart or expected goals (xG) model using Python or R Studio.

SPORTS DATA ANALYTICS INNOVATE CHOICE BOARD



Choice 5: If there is a Sports Data Analytics project you would like to do that's not shown here, that's OK! We want you to do what excites you! Discuss it with your educator then GO FOR IT!

Choice 4: You are asked to project outcomes for potential picks for the next draft of your favorite sports team. Look at metrics for a set of players to determine whether they would be an instrumental addition to the team. Look at physical and performance data over a period of time, analyze the data, and create draft scenarios using a free data visualization tool of your choice.

SHOWCASE



From the choice board below, select a way to showcase your innovation project to a local, national, or global audience:

Choice 1: Create a YouTube video that details your learning through the project challenge.

Choice 2: Create a blog that highlights your findings and/or learning journey.

Choice 3: Create a digital portfolio that represents your data and findings using Google Slides or Bulb that showcases your project and learning journey.



Meet Dr. Katherine Evans, the first woman in the NBA to head an analytics department.

Choice 5: Share your findings to an audience (your class, a coach, or the academy Advisory Board) as if you were in a press conference with sportscasters. Allow for a Q&A, then solicit feedback on the quality of your visuals and how you shared your findings.

Choice 4: Code or create a simple webpage to showcase your findings and learning. Consider Replit or Wix.

If you would like to share your project with NAF, please submit it HERE. You must have your educator's permission before you do. (NAF will not share your work unless we have your educator's and your approval.)



Choice 6: Showcase your project in a format of your choosing.

