Sports Analytics III

Produced by Dr. Mario
UNC STOR 538

Industry Past

- **Sports Analytics Use Survey (2013)**

- **Sample of 27 People (NFL, MLB, NBA, EPL)**

- **How Many Different Sources?**
    - 1-2 (6.7%)
    - 3-4 (33.3%)
    - 5-6 (13.3%)
    - >6 (46.71%)

Industry Past

- **How Much Data is Centralized?**
  - **All (31.3%)**
  - **Most (37.4%)**
  - **Some (31.3%)**

- **How Much Data is Dependent on One Person?**
  - **Some (50.0%)**
  - **Most (43.7%)**
  - **All Data Centralized (6.3%)**

Industry Past

- **Is Data Checked for Errors?**
  - **Always (31.3%)**
  - **Usually (37.5%)**
  - **Sometimes (18.8%)**
  - **Occasionally (6.1%)**
  - **Rarely (6.3%)**

- **How Many Database Programmers are Employed?**
  - **0 (37.5%)**
  - **1-2 (50.0%)**
  - **3-4 (0.0%)**
  - **>5 (12.5%)**

Industry Past

- **How Many Statistical Analysts are Employed?**
  - **0 (20.0%)**
  - **1-2 (66.6%)**
  - **3-4 (0.0%)**
  - **>5 (13.3%)**

- **Roadblock: Difficulty Identifying Strong Applicant**

- **Difficulty in Both Hiring and Evaluating**

Industry Past

- **Clear Process for Hiring/Evaluating Analysts**
  - **Strongly Agree (13.3%/14.3%)**
  - **Somewhat Agree (13.3%/14.3%)**
  - **Neutral (26.7%/28.6%)**
  - **Somewhat Disagree (13.4%/21.4%)**
  - **Strongly Disagree (33.3%/21.4%)**

- **Analytic Resources in Line with Strategic Game Plan**
  - **Strongly Agree (26.7%)**
  - **Somewhat Agree (33.3%)**
  - **Neutral (33.3%)**
  - **Strongly Disagree (6.7%)**

Industry Present

- **Value Placed on Sports Analytics**

    - **Business Research Company Analysis**
        - **Global Sports Industry $486.61B to $512.14B**
        - **Actual CAGR of 5.2% in 2023**
        - **Expected to Grow to $623.63B in 2027 (CAGR 5%)**

    - **Deloitte Article Industry Trends for 2023**

Industry Present

- **Value Placed on Sports Analytics**

  - **Grand View Research on Sports Analytics Market**
    - **Valued at $2.73B in 2022 and $3.52B in 2023**
    - **Expected CAGR Between 2023 and 2030 is 22.3%**

      $Projection\ in\ 2030 = 3.52 * (1 + CAGR)^7 = 14.41$
    - **Software Segment Dominates at 61% of Market**
    - **Services Segment Expected to Grow by 19%**
    - **On-Field Analytics (61%) Dominates Off-Field Analytics**

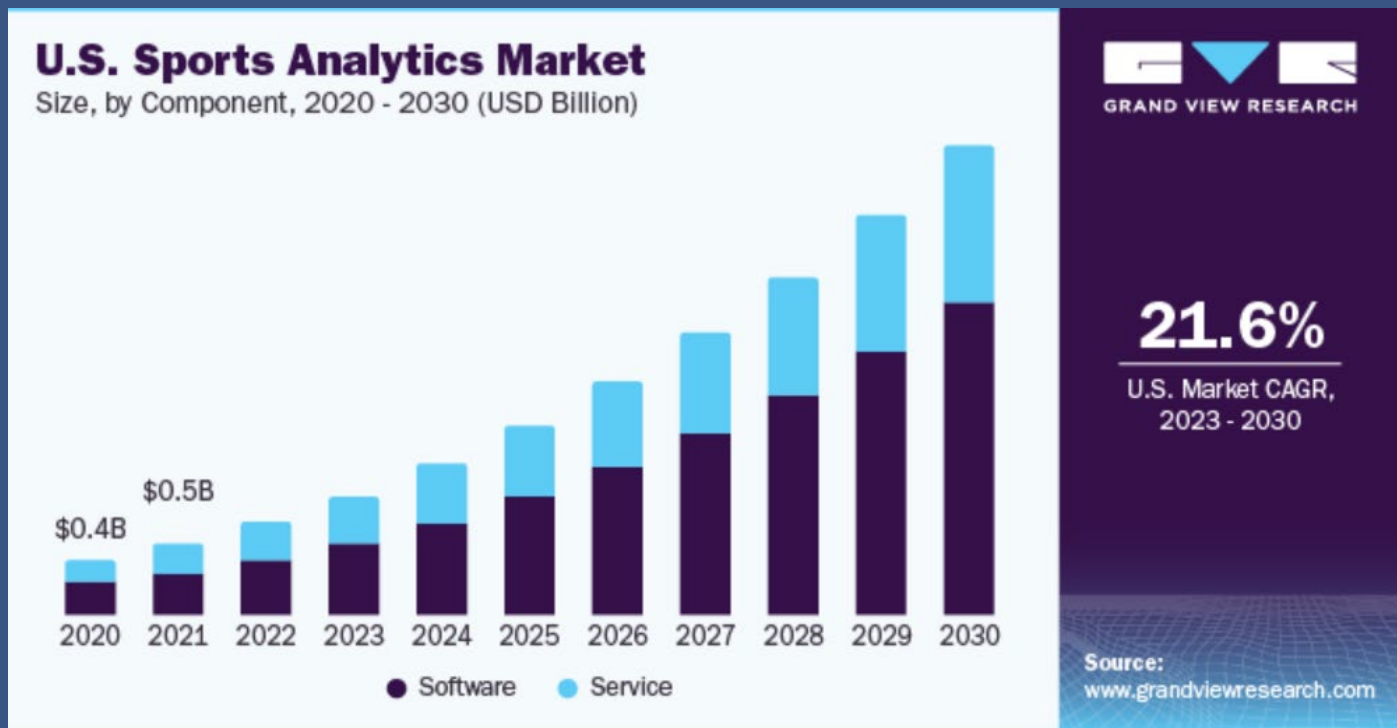**$2.73B**   **$3.52B**   →   **$14.41B**

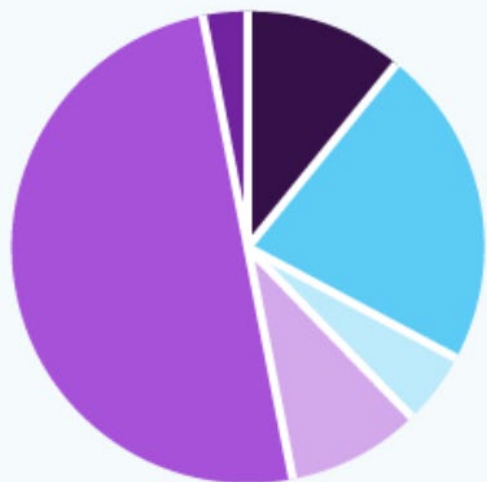2022   2023   2030

Industry Present

- **Value Placed on Sports Analytics**

  - **Grand View Research on Sports Analytics Market**

U.S. Sports Analytics Market
Size, by Component, 2020 - 2030 (USD Billion)

GRAND VIEW RESEARCH

21.6%
U.S. Market CAGR,
2023 - 2030

$0.4B $0.5B

2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030

● Software ● Service

Source:
www.grandviewresearch.com

Industry Present

- **Value Placed on Sports Analytics**

  - **Grand View Research on Sports Analytics Market**

Global Sports Analytics Market
Share, by End-user, 2022 (%)

GRAND VIEW RESEARCH

$2.7B
Global Market Size, 2022

- ● Sports Teams
- ● Sports Leagues/Associations
- ● Individual Players/Coaches
- ● Media Organizations
- ● Sports Betting
- ● Others

Source:
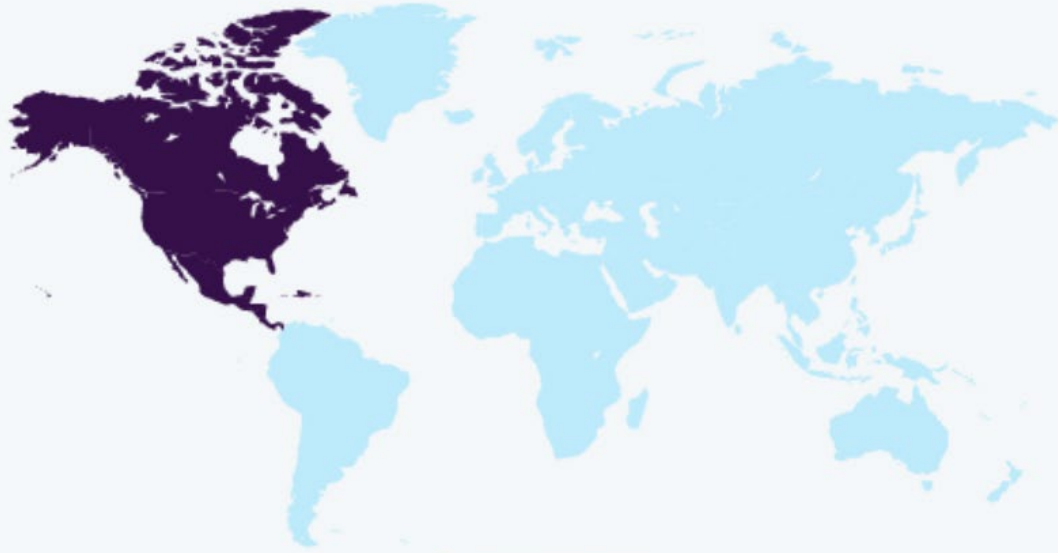www.grandviewresearch.com

Industry Present

- **Value Placed on Sports Analytics**

  - **Grand View Research on Sports Analytics Market**

Sports Analytics Market
Trends, by Region, 2023 - 2030

GRAND VIEW RESEARCH

28.0%
North America Market
Revenue Share, 2022

● Largest Market

Source:
www.grandviewresearch.com

Industry Present

- **Value Placed on Sports Analytics**

  - **Grand View Research on Sports Analytics Market**
    - **Agile Sports Analytics, LLC**
    - **Catapult Sports**
    - **ChrynoHego Corporation**
    - **Deltatre**
    - **Experfy Inc.**
    - **Genius Sports Group**
    - **IBM Corporation**
    - **Oracle Corporation**
    - **SAP SE**
    - **SAS Institute Inc.**
    - **Sportradar AG**
    - **Stats Perform**

Industry Present

- **Modern Applications of Sports Analytics**

  - **Helping the Team Win**
    - **Automated Video Analysis (Lincoln City, UK Football)**
    - **3D Depth Camera (NBA)**
    - **Wearable Technology (NBA, NHL)**

  - **Improving the Fan Experience**
    - **Analysis of Digital Engagement**
    - **Sentiment in Social Media**
    - **Analysis of Fan Behavior in Stadium (New England Patriots)**
    - **Wireless Internet and Phone Apps**
    - **Apps Supply Game Analytics, Parking Information, Promotions, and Traffic Information to the Fans (NFL)**

Industry Present

- **Modern Applications of Sports Analytics**

    - **Benefiting Other Stakeholders**
        - **Tracking Fan Behavior Outside the Stadium**
        - **Telecommunication, Retailers, Payment Providers, Ticket Agencies, and Sponsorships**
        - **Adapt to Quick Changes in Consumer Behavior**

    - **Optimizing the Back-Office**
        - **HR Practices**
        - **Game Scheduling**
        - **Supply Chain Management and Logistics**
        - **Marketing and Promotions**
        - **Procurement of Goods and Services**

Industry Present

- **Modern Applications of Sports Analytics**

  - **Advancing Sports Gambling**
    - **Supreme Court Ruling Previous Statute Violated 10th Amendment (Murphy v. National Collegiate Athletic Association)**
    - **States Free to Legislate Gambling**
    - **Improvement of Gambling Products**
    - **Data Aggregation and Visualization for Bettors**
    - **Develop Daily Fantasy Sports**
    - **Grandview Research**
      - **Global Market Valued at $83.65B in 2022**
      - **Projected to Reach $182.12B in 2030**

Your Industry Future

- **Prerequisites by Howard Hamilton (Soccermetrics)**

  - **Technical Skills**
    - **Mathematics (Linear Algebra/Probability Essential)**
    - **Statistics (Frequentist and Bayesian Perspectives)**
    - **Machine Learning (Supervised and Unsupervised)**
    - **Programming (R/Python, Data Structures, OOP)**
    - **Databases**
    - **Visualization**

  - **Socials Skills, Ethics, and the Law**

  - **Knowledgeable About All Aspects of the Sport**

Your Industry Future

- ## Real Jobs (Indeed)

  - ### Data Scientist, FanDuel
    - Bachelor's Degree in Numerate Degree
    - Build Machine Learning Models
    - Data Collection and Cleaning
    - R or Python + SQL

  - ### Research Analyst, Harris Blitzer Sports & Entertainment
    - Gather, Validate, Synthesize 3rd Party Fan Data
    - Focus on Data Visualization and Communication Skills
    - EXCEL + PowerPoint + PowerBI

Your Industry Future

- **Real Jobs (Indeed)**

  - **Scheels All Sports, Inc**
    - **Retail Company**
    - **Machine Learning to Analyze Data**
    - **Data Collection and Improvement in Reporting Insights**

  - **Data Analyst, Elevate Sports Ventures**
    - **Consulting Firm for over 175 Sports Teams, Brands, Venues, etc.**
    - **Obtaining, Analyzing, Interpretating Market Sales Data**
    - **Lower Level and Data Entry Involved**
    - **Located in Charlotte**

Your Industry Future

- ## Real Jobs (Indeed)

  - ### Trading Analyst, DraftKings
    - Bachelor's Degree in Math, Stats, CS, etc.
    - Experience with SQL, R, Excel or Python
    - Experience with Tableau

  - ### Data Analyst, Eventellect
    - Bachelor's Degree in Math, Stats, CS, etc.
    - Research Regarding Single Game Ticket Sales
    - SQL Proficiency
    - Analysis of Large Datasets
    - Python Experience

Your Industry Future

- ## Real Jobs (Indeed)

  - ## Marketing Analytics Analyst, NBA
    - Develop Dashboards Using Tableau or PowerBI
    - R or Python + SQL

  - ## Email Marketing Analyst, Arizona Cardinals
    - AB Testing on Email and SMS
    - Monthly Reports on Marketing Data
    - HTML + SQL + Python
    - Machine Learning

Your Industry Future

- **Real Jobs (Indeed)**

  - **Baseball Operations Analyst, Detroit Tigers**
    - Master's Degree Preferred. Statistics, Math, CS, etc.
    - Experience Working with Baseball Data
    - R or STATA or SPSS or SAS or Python
    - Expertise with SQL

  - **Quantitative Sports Researcher, SIG**
    - Master's or PhD Preferred
    - Experience Working on Sports Analytics Projects
    - Build Statistical Forecasting Models Linked to Sports Betting

Your Industry Future

- **Conferences**

  - **MIT Sloan (March)**
  - **International Sports Analytics Conference (July)**
  - **UConn Sports Analytics Symposium (April)**
  - **OSU Sports Analytics Conference (April)**
  - **Carnegie Mellon Sports Analytics Conference (?)**
  - **New England Symposium on Stat. in Sports (2025)**
  - **Great Lakes Data and Analytics (April)**
  - **International Conference on Sports Analytics and Data Visualization (August)**

Final Inspiration

Defense wins championships.
Offense wins contracts.
Be offensive.

- Mahatma Mario