



Sports Analytics III

Produced by Dr. Mario
UNC STOR 390

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%)



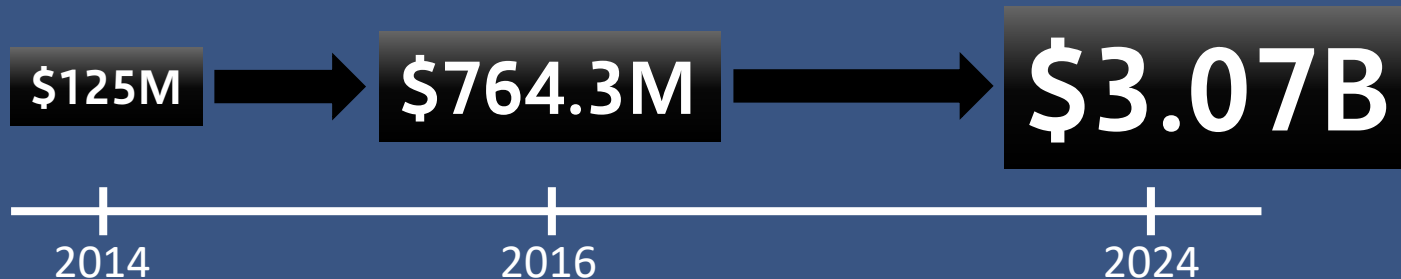
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 - Strongly Disagree (6.7%)



Industry Present

- Article by Russell Karp (ITProPortal.com)
 - Global Sports Market Worth \$600B-\$700B (KPMG)
 - Including All Business Dedicated to Sports \$1.3T
 - Investment in Data Services



Projections in 2024 According to MarketWatch.com



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
 - Worth Over \$5B According to Nevada Gaming Control Board (NGCB)



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)
 - Quantitative Sports Researcher for SIG
 - Build Statistical Forecasting Models
 - Implement Models and Simulate Outcomes
 - Demonstrated Experience with Sports Analytics Projects
 - Python, C++, Matlab and/or R
 - PhD Preferred
 - Analyst for the Cleveland Indians
 - Mission is to win a World Series (LOL)
 - Design New Strategies, Tools, and Tactics
 - Understand Statistics and Experience with Regression
 - Tableau, SQL, and R



Your Industry Future

- Real Jobs (Indeed)
 - Part-time Faculty for Syracuse
 - Introductory Sports Science Analytics
 - Master's with 10+ Years Industry Experience
 - Strategy Analyst for Skillz Inc.
 - Accelerate the Convergence of Sports, Video Games, & Media
 - Run A/B Experiments to Optimize the User Experience
 - Lead Analytics Projects
 - Honesty in Developing and Sharing Insights from User Data
 - Experience Using Data Visualization Platforms



Your Industry Future

- Real Jobs (Indeed)
 - Sports Statistical Analyst for CBS
 - Synthesize Sports Data and Statistics
 - Understand How Stats are Used to Make Predictions
 - Season Long and Daily Fantasy Sports Player
 - Knowledge of Sports Betting and Handicapping Stats
 - Revenue and Forecasting Associate for FanDuel
 - Forecast Daily Revenue and Historical Trends
 - Track Live Contest Performance
 - Create Dashboards and Reports for Stakeholders
 - Regression, Cohort Analysis, Clustering, A/B Testing
 - Experience with SQL, Excel, R, and/or Python



Your Industry Future

- Real Jobs (Indeed)
 - Quantitative Ticket Trader and Analyst for SeatSnob
 - Use Analytics Platform to Identify Buying Opportunities
 - Improve and Refine Quantitative Tools
 - Bachelor's with Strong Numerical/Quantitative Skills
 - Strong in Excel
 - Knowledge of R/Python
 - Valuation & Analytics Intern at IPG360
 - Build Content Database for Quarterly Insights Report
 - Market and Industry Research Assistance
 - 3.0 GPA and Strong Software Skills (Microsoft Office)



Your Industry Future

- Real Jobs (Indeed)
 - Associate Data Scientist for Tokio Marine HCC
 - Provide Specialized Insurance Products for Sports
 - Disciplines: Business, Math, and IT
 - Tied to Actuarial Topics and Ideas
 - Python, R, SQL, JSON, XML, C#, Excel, and VBA
 - Data Visualization Technologies
 - Bachelor's Degree



Your Industry Future

- Conferences

- September

- Football Analytics and Performance Summit in Vienna
 - RIT Sports Analytics Conference in Rochester, NY
 - New England Symposium on Statistics in Sports in Cambridge, MA

- October

- Great Lakes Analytics Conference in Stevens Point, WI
 - Texas Sports Analytics Conference in Dallas
 - UConn Sports Analytics Conference in Storrs, CT
 - Japan Sports Analytics Conference in Tokyo

Compiled by statsheetstuffers.com and sportsanalyticsconferences.com



Your Industry Future

- Conferences

- November

- Carnegie Mellon Sports Analytics Conference in Pittsburgh, PA
 - Ottawa Hockey Analytics at Carleton in Ottawa
 - Midwest Sports Analytics Meeting in Pelle, IA
 - United Kingdom Sports Analytics Conference in London

- December

- Midwest Sports Biometrics Conference in San Francisco, CA

- March

- MIT Sloan Sports Analytics Conference in Boston, MA

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Final Inspiration

Defense wins championships.
Offense wins contracts.
Be offensive.

- Mahatma Mario