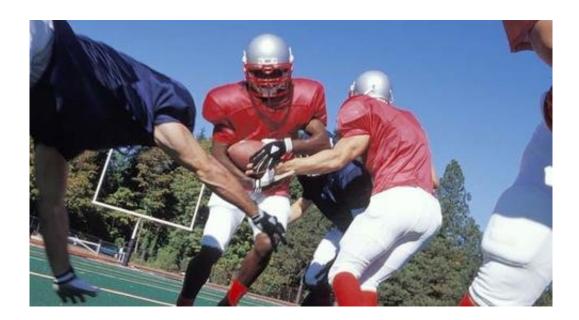# Researchers develop new model to predict which universities student athletes will commit to

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Credit: Institute for Operations Research and the Management Sciences

With revenue from college football at an unprecedented $3.4 billion annually, universities across the country invest tens of millions each year in recruitment efforts to attract high school athletes to play for their football teams. But with talented players typically receiving scholarship offers from multiple universities, team rosters are in limbo until student athletes commit to a university. However, a new study in the INFORMS journal *Decision Analysis* shares how social media can provide

universities with valuable insight into the decision-making process of their recruits.

The study "Online and Off the Field: Predicting School Choice in College Football Recruiting from Social Media Data," was conducted by researchers from the University of Iowa, Kristina Gavin Bigsby, Jeffrey W. Ohlmann, and Kang Zhao. The authors scraped data on 2,644 high school football athletes in the 2016 recruiting class from 247Sports.com, an online recruiting database.

"For each individual athlete, we collected timelines of recruiting events, such as scholarship offers, visits, commitments, and decommitments," said Bigsby. "We also obtained basic information about the recruiting schools, including location, academic ranking, and football team ranking. "

From there, the authors narrowed their data set further to 573 student athletes with two or more scholarship offers and public Twitter accounts. By evaluating tweet content, hashtags, followers, accounts followed, and other Twitter interactions such as mentions, replies, and retweets, the authors developed a model to help predict which universities student athletes would ultimately commit to.

"When a student interacts with a university on Twitter, this is associated with an 85 percent increase in the odds of selecting that school," said Ohlmann. "In addition, when anyone associated with a university (coach, other recruit, or current athlete) begins following a student on Twitter in the month leading up their decision, the odds of that student attending that university increase 40 to 51 percent for each new follower."

The authors also found that for every coach or fellow recruit of a university that a student began following on Twitter, the student became 47 to 62 percent more likely to attend that university. Alternately, the

likelihood of a student attending a university decreased by 3 percent for every account the student began following from a different university.

For hashtag fans, the likelihood of a student attending a specific university increased by 305 percent for when that student referenced the university in a hashtag, while mentioning an alternate school was associated with a 65 percent decrease in those odds.

The insight provided by the model can give university coaching and recruiting staff earlier insight into which students will commit to their teams, and to those of competing universities, helping them to better allocate resources towards the most viable candidates.

"The personnel needs of a college football program can change quickly in the final weeks of recruitment - especially in cases where a previously committed athlete decommits - compelling coaches to revisit their options," said Zhao. "Our model may also prove helpful to coaches attempting to identify and recruit athletes without a strong attachment to any school."

More information: Kristina Gavin Bigsby et al. Online and Off the Field: Predicting School Choice in College Football Recruiting from Social Media Data, *Decision Analysis* (2017). DOI: 10.1287/deca.2017.0353

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