Ramapo College professor and alumnus collaborate on statistical model for NFL draft predictions

MAHWAH, N.J. – The 2022 National Football League draft will have a bit of Ramapo College behind-the-scenes expertise when the selections begin later this month in Paradise, Nevada.

Ramapo Professor of Economics Alexandre Olbrecht and Ramapo alumnus Jeremy Rosen ’17 have collaborated on an article, using an advanced statistical model and mathematical methodology, to predict how well college quarterbacks, likely to be selected in the first three rounds of the draft, will perform during their NFL careers. The draft is scheduled for April 28-30 on ESPN.com. The article is due to be posted on the ESPN website on April 9.

“This is yet another example of the advantages students have at Ramapo College, where they have the ability to work closely with faculty,” Olbrecht said. “Jeremy is one of top graduates and has shown himself to be a prolific researcher in his short graduate career. While our work started at Ramapo College, it has not ended there as we are still working together. I’m excited to see what Jeremy and I collaborate on next.”

Olbrecht and Rosen teamed with Aaron Schatz of Footballoutsiders.com using college statistics and other available information to predict how these players would be expected to play in the NFL, and provide a probability distribution on whether the quarterback is expected to be a bust, average starter, upper tier starter, or potential Hall of Fame player over the course of their career.
The work started in the fall of 2016 when Rosen approached Olbrecht about doing a research project for his honors thesis. Rosen, then a Ramapo student with a mathematics major and economics minor, had an interest in combining math and sports. With Olbrecht’s primary research areas being labor and sports economics, the professor/student collaboration was a logical match. Together they asked a question: how could statistics be used to improve the selection of quarterbacks into the NFL, which is notorious for high profile first-round busts.

In 2018, Olbrecht and Rosen debuted their functional mobility model on footballoutsiders.com, with the academic version of their work published in Contemporary Economic Policy. Subsequent models were published in 2019 and 2020, opposite QBASE, the other main model that predicted quarterback performance. In 2021, Olbrecht, Rosen and Schatz combined the functional mobility model with QBASE, subsequently called QBASE 2.0. It was published on ESPN and footballoutsiders.com, with QBASE 2.0 now having a more permanent home at ESPN. Additionally, Superbowl winning head coach Brian Billick (Baltimore Ravens) devoted a chapter in his book, “The Q-Factor: The Elusive Search For the Next Great NFL Quarterback,” to the work of Olbrecht and Rosen.

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Ramapo College of New Jersey is the state’s premier public liberal arts college and is committed to academic excellence through interdisciplinary and experiential learning, and international and intercultural understanding. The College is ranked #1 among New Jersey public institutions by College Choice; is recognized as the state’s top college on the list of Best Disability Schools by Great Value Colleges; was named one of the 50 Most Beautiful College Campuses in America by CondeNast Traveler; and is recognized as a top college by U.S. News & World Report, Kiplinger's, Princeton Review and Money magazine, among others. Ramapo College is also distinguished as a Career Development College of Distinction by CollegesofDistinction.com, boasts the best campus housing in New Jersey on Niche.com, and is designated a “Military Friendly College” in Victoria Media’s Guide to Military Friendly Schools.

Established in 1969, Ramapo College offers bachelor’s degrees in the arts, business, data science, humanities, social sciences and the sciences, as well as in professional studies, which include business, education, nursing and social work. In addition, the College offers courses leading to teacher certification at the elementary and secondary levels, and offers graduate programs leading to master’s degrees in Accounting, Applied Mathematics, Business Administration, Contemporary Instructional Design, Computer Science, Creative Music Technology, Data Science, Educational Leadership, Nursing, Social Work and Special Education, as well as a Doctor of Nursing Practice.