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LIS 750
Assignment Two

MIDWEST UNIVERSITY RANKING ANALYSIS

A university's online presence is often the first impression it makes, with potential students, employees, or even the competition. In addition to the home page and the information for each department and academic program, university websites may host learning management software, campus merchandise stores, and various blogs and media. Universities also develop their online profile through social media channels.

But another source of a first impression may be the U.S. News and World Report. Famous for their rankings of universities in various categories, they are a go-to resource for prospective students to analyze their choices for higher education. Obtaining a high ranking on one of their main lists guarantees a certain amount of visibility and marketing for a college.

In this analysis, we'll be looking at the Best Regional Universities Midwest Rankings, specifically the Top 25. One of four regions separated for ranking, the Midwest consists of the following states: Ohio, Michigan, Indiana, Illinois, Wisconsin, Minnesota, Iowa, Missouri, Kansas, Nebraska, South Dakota, and North Dakota. The universities on the list may be private or public.

Analyzing the list began with making a list of each university on the list by rank. Several are tied, notably three at 7 and three at 14. Butler University is #1, and Dominican University is #25. Each university is also listed with its city, state, and zip, and its website URL.

Continuing the analysis, I began with adding the number of pages indexed by Google for each site. This was easy to accomplish, by using the "site:" Google prefix before each URL, and looking under Tools for the number of pages listed. This number should include every page Google's crawlers have found with that URL.

Then, using a free account on Semrush, I looked up each university's URL to find information about their traffic. Based on the SEO report freely available for one university at a time, I could source information on the most recent month of historical data: September 2025. While a full year of data would be preferable, I could not find a way to get the full year of data without signing up for a paid account. Attempting to use ahrefs.com or seranking.com produced the same results: requiring account sign-ins to access any of their tools.

Ultimately, with Semrush, I was able to gather at least one month's worth of consistent data across all 25 university websites: the number of visits, unique visitors, and backlinks for September 2025. As the first full month of the school year – and a common month for college applications from high school students – September would most likely represent a high point in website traffic for all of these universities. It would be impossible to analyze the numbers for these websites as "high" or "low" without the context of multiple years of data, but looking purely at how they compare with *each other* is more feasible because the data is lined up as the same time frame and metrics.

Finally, I sourced the number of Facebook followers that each university's Facebook presence showed on their public profiles. Each university's website has their social media channels linked at the bottom of the page, but accessing those channels often required signing in to a personal account with that social media site. Facebook followers were publicly available without signing in, so this was the data point I chose to list for this analysis.

With all of this data listed in table format in Excel, the real analysis could begin. First, I wanted to map the universities with Google Maps. Using colored icons corresponding to the ranking of the universities, I tried to see if there were any geographic trends in the rankings. The universities were scattered throughout the region, though only two were in the four most Western states. But the rankings appear to be mostly distributed evenly.

Then I used scatterplots to analyze correlation between the rankings and the different data points gathered in the initial phase. If having a higher number – of indexed pages, September visits, etc. – were correlated with a higher ranking – aka a lower number – we should see a negative correlation that tilts down from left to right, and an equation that begins with a negative number. If having a lower number correlated with a higher ranking, we should see a positive correlation that tilts up to the right, with a positive equation.

None of the data points were highly correlated, with the data scattered without strong trends. However, one thing I quickly noted was that most of the data categories (with the exception of Facebook followers) had an outlier that was much higher than the other numbers. This was skewing the trendlines by drawing them up towards the outlier, even though the rest of the data didn't align with that same trend. The two strongest examples of this were in the influence of September unique visitors, and September backlinks. With the outlier, visitors accounted for a positive trendline with an R-squared value of 0.0277, meaning more visitors resulted in a lower ranking (closer to 25); without the outlier, it showed a negative trendline with an R-squared value of 0.0287, meaning that more visitors resulted in a higher ranking (closer to 1). Backlinks went from a subtle negative trendline with an R-squared value of 0.0027, to the strongest correlation with a negative trendline and an R-squared value of 0.0594.

Based on this analysis, none of these data points are strongly correlated with higher rankings, but with the outliers removed then the most impactful data was that having more backlinks could correlate to a higher ranking.

Yet the analysis was not entirely complete. I turned to Google Gemini to see if the AI tool could offer any further information, specifically on why Dominican University was ranking at #25 when it had been higher in the past. I asked Gemini: "You are an expert on college rankings, especially in the Midwestern Region. Dominican University is #25 in the U.S. News and World Report, but this is lower than previous years. While explaining your analysis, can you tell me why Dominican's ranking has dropped?" Gemini informed me that Dominican had ranked #11 in 2024, and it explained that the 2024 ranking was due to an overhaul to the rankings' methodology, and the drop since then was due to other universities "catching up" and that it is a very competitive region.

When I further asked: "Could you tell me if Dominican's online presence has anything to do with their ranking, especially when compared to the other Top 25 universities?", Gemini gave a very thoughtful response. It pointed out that the rankings do not directly score websites, social media, or "online presence" as part of their process. But it pointed out several ways a university's online presence could still impact their ranking indirectly. It listed the "peer assessment" where other school administrators must rank their peers – and suggested that they may use the website to gather that information. It also listed that student outcomes were key to rankings, but that recruitment, satisfaction, and social mobility may be greatly impacted by a university's website. This showed a more nuanced understanding of how a university's website may relate to its ranking without being directly correlated. While not able to quantify these factors with data, it may be important for universities to consider.