Capstone Two: Project Proposal

For my second capstone project, I will be analyzing a dataset of every UFC fight in the history of the organization to determine whether there is an age at which performance markedly decreases and fighters should safely retire. Throughout the course of my project, I may detect factors other than age that also contribute to a change in performance. The results of this project could be important, not just to me due to personal curiosity, but to viewers of the sport and the UFC as an organization. Every week, talent scouts at the UFC are scouring tapes and reviewing recommendations, looking for the next big thing or considering whether fighters should continue to fight in the organization. Knowing the age when most fighters’ performances begin to decline could play an important role in these decisions. It could also play an important role for casinos and other sports betting organizations when calculating fighters’ winning odds.

For context, there have been several fighters in the UFC who were widely regarded as legends in their prime but refused to retire despite public pressure. One of the biggest examples of this is Anderson Silva, who many still consider the greatest fighter of all time. Although UFC fans have been characterized as bloodthirsty purveyors of a modern gladiator sport, the truth is most fans do not want to see a fighter past their prime suffering injuries in the Octagon for the entertainment of millions. Prominent figures of the sport commonly use the late-30s as a good time for fighters to retire. Here, a definitive age when fight performance declines could keep the guesswork to a minimum and guide this conversation in the right direction. The criteria of success for this project would be discovering this age, or some other time-related factor (like age of fighting career instead of fighter’s chronological age). The scope of solution space would be any variable that is relevant to age. There is not much in terms of constraint within solution space, as data is available for every UFC fight ever, and there is no deadline for this project (although it would be ideal for the results of this project to reach Anderson Silva before he receives a career-ending injury). Stakeholders to provide key insight will be my mentor, Eleanor Thomas, as well as my peers who I may share this project with. The key data source will come from Kaggle, and additional information may be scoured from the UFC website itself.

The Kaggle dataset I will be using has been scraped from <http://www.ufcstats.com/statistics/events/completed>. After making sure the data is clean and workable, I will analyze it for correlations between age and fight performance. This will include variables like whether they won the fight to performance during the fight, like significant strikes landed or successful takedowns. I will then compare the strength of correlations between fight performance and age, along with time spent as an MMA fighter or time spent in the UFC, to see whether these other factors have a heavier influence than age. My deliverable will be a GitHub repo containing the work for each step of my project, including a slide deck and project report.