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DATA 6560 – Sports Analytics

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<div align="center">Project Proposal</div>

<div align="center">The Value of 3pt Shooting as Players Age</div>

This project will analyze the value of 3-point shooters as players age in attempt to deliver more accurate data on how to structure contracts to young vs. aging players in the NBA. Basketball has been transformed in the last 15 years with the increase in 3pt shooting. Rookies are joining the NBA and shooting better than some superstars, and older players are developing 3pt shooting capabilities that they never had before t adapt to the changing game. Aging NBA players that pass their prime, but develop meaningful shooting capabilities are hard to value, thus analyzing the value of the 3pt shot throughout a players age can provide valuable insights for contract negotiations.

The project will focus on VORP (value over replacement player) and OWS (offensive win shares) as a result of 3-point data relative to other measurable statistics. The data will primarily come from basketball reference from the 2024-2025 season. This database contains basic and advanced player statistics which will allow me to identify important 3pt metrics that correlate to OWS. This vast database will help me find the strongest correlations which will best highlight the examined trend. I will use regression to determine the correlation between 3pt makes and OWS for each age of player. This will help demonstrate if there is any correlation between the value of a 3pt make (with regards to player) and OWS as a function of age. I will use scatter plot visuals to demonstrate correlations and define why I use VORP or OWS.

I will start by finding which 3pt metrics yield the strongest relationships to OWS through the use of regression. I will next evaluate the correlation between said 3pt metric and OWS at different ages to determine if there is a difference as players age. If there is no difference in correlation as players age, I will have to change my project to include other metrics that change in value as players age. Any changes to the project proposal will have the interest of defining a clear way to value players as they age based on a combination of 3pt and other relevant metrics.