Please explain, in one or two paragraphs, why you would like to be an Undergraduate Research Assistant in The University of North Carolina at Chapel Hill Sports Analysis and Intelligence Laboratory.

As a student major in statistics, I have learned how to do a research, and conduct a project in my previous classes. Producing a transformative model and learning from practices are always my goal. In my machine learning class, I have done a project predicting the house price in Iowa, Ames. However, due to the lack of time, there were still unsolved problems such as how to do feature selection more wisely, how to further improve the optimal models and so on. Hence, I am passionate to gain an opportunity to use more energy and time to conduct a complete investigation.

Besides, I realize that practices are my motivation to think deeper about the knowledge I’ve learned. For example, I was confused about machine-learning algorithms I learned. But when I utilized it in my own project, I earned practical experiences and figured out their purposes. Hence, I would like seize this chance to be an Undergraduate Research Assistant to gain experiences and bring my own perspective to the research.

Please share, in one or two paragraphs, how you feel you may fit into both the sports and research communities here at the university, as an Undergraduate Student Analyst in The University of North Carolina at Chapel Hill Sports Analysis and Intelligence Laboratory.

Firstly, I was not a person into sports before. But when I was a freshman, I participated in Chinese Woman Basketball club to connect to people and accomodate to this new environment. After training and playing the games with team members, I started to be interested in basketball. Basketball is a game that not only attaches importance to personal power but also relies on teamwork, and now I enjoy the time playing basketball with my friends and gain more comprehensive knowledge about basketball.

Second, I believe I could fit into the research community since I am willing to communicate and stick to schedule. Based on my past experiences, I realize that it is inevitable for people to have diversed opinions during research, I usually brainstorm with my partner to figure out the priority and feasibility of tasks to make things orderly. Besides, every procedure in the research is linked to the next one, so I always set up a deadline for myself to check my work and prevent overdue.

Please choose a scholarly article related to sports analytics and summarize the article in one paragraph as if you were summarizing it to a coach. Remember to cite the name of the authors and the journal.

“The role of secondary assists in basketball – an analysis of its characteristics and effect on scoring”---[Bence Supola](https://www-tandfonline-com.libproxy.lib.unc.edu/author/Supola,+Bence), [Thomas Hoch](https://www-tandfonline-com.libproxy.lib.unc.edu/author/Hoch,+Thomas), [Arnold Baca](https://www-tandfonline-com.libproxy.lib.unc.edu/author/Baca,+Arnold)

This research utilizes the dataset from SportVU system, which includes all games in 2015-2016 NBA season. The article shows that teams that have more secondary assists create space in areas related to higher expected points. Due to the vague definition of assist in NBA, researchers set a more general and rigorous manner: assists and secondary assists are counted if the player possesses the ball for no more than 2s between receiving and passing/shooting. The results shows that shots in high- expected-point area (from another research which shows that inside shots and corner threes are the two attempts with higher expected points), and baseline shots are related to secondary assists. Researchers indicate that with given data, corner threes dominate the competition of patterns, and secondary-assisted corner threes are more successful and create more space between the defender and three pointers from the corner. Besides, the best performer secondary assist patterns are played to the corners, and they are led by passing sequences that go through the middle (especially the high post and the top half of the paint.)

Please write out a three to five page (or equivalent) analysis, that answers some question (you may choose the question) relevant to sports analytics. You must perform your statistical analysis with R or Python using data you acquired via the internet. We recommend using Sports Reference and/or Andrew Sundberg’s College Basketball Dataset via Kaggle for your analysis. The document form can be prepared using Microsoft Word, R Markdown, or anything else (the inclusion of graphs in the paper is encouraged). You must upload the entire analysis, including your scripts, to GitHub. Please email the link to [ckerr@unc.edu](mailto:ckerr@unc.edu) by 11:59 PM on January 15th, 2023. Please include "SAIL Application Paper" in the subject line.

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