NFL Draft - Chicago Bears

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Executive Summary

With the first pick in the 2024 NFL draft, we will be drafting Caleb Williams on behalf of the Chicago Bears. Caleb Williams is widely regarded as one of the best quarterback prospects in recent history, being labeled a "generational talent" and drawing comparisons to stars like Patrick Mahomes (Easterling, 2023). After an investigation into the Chicago Bears organization, it is clear that the team has a massive need at quarterback that will need to be filled with the first pick in the NFL draft. The team has been building under new General Manager Ryan Poles and has acquired a cast of solid players to support a new rookie quarterback. This is a great year to be drafting a quarterback, as the top five quarterback prospects in the 2024 draft class (Caleb Williams, Jayden Daniels, Drake Maye, JJ McCarthy, and Michael Penix) have won multiple national championships and Heisman trophy awards as a group.

After further research into each of the five prospects available, it is clear that Caleb Williams is by far the best on-field prospect, and has the potential to be one of the greatest quarterbacks in NFL history. Our player performance model predicts him to have a top-25 passer rating in NFL history, and he is the fourth-safest quarterback draft pick in the last 30 years in terms of low probability of being a bust. Our model also matched Williams to former and current stars like Patrick Mahomes and Justin Herbert. While we identified some potential red flags in William's behavior off the field, it is clear that he has made strides and is growing as a young man. Should he announce that he would not play for the Chicago Bears if drafted by our organization, we would pivot to take Jayden Daniels, who also is predicted to have a high passer rating and a relatively low probability of being a bust, despite weaker comparisons. Daniels is also a slightly less controversial prospect off the field and would fit well within our organization with our focus on community service.

Organizational SWOT

The Chicago Bears are a successful organization. At $6.3 billion, they have the fifth-highest franchise value in the National Football League (NFL) (Gough, 2023). With its stadium near downtown Chicago, the organization is dedicated to using its value for good by connecting with the community. Their community outreach programs assist schools, youth programs, and charities all around the Chicago area (*Community*, n.d.). Bears players often interact with community members to make a lasting impact on those involved, such as going into schools or hospitals. Specifically, Bears Care is the Bears' charity fund, which focuses on supporting children and families in need, youth athletics and education, and medical health research efforts. Bears Care has given over $29 million in grants since 2006, showing that the Bears are dedicated to making a long-lasting effect on the community (*Bears Care*, n.d.). In addition, they have created donation programs and campaigns to raise money for the surrounding communities and important issues, such as social justice, youth football programs, military programs, and health and wellness initiatives (*Bears Care*, n.d.). These various outreach programs and campaigns allow for the community to connect with the Bears while receiving financial support from the organization.

In addition to the Chicago community, the Bears focus heavily on fans to keep them engaged. With active social media accounts on platforms such as Instagram, X, TikTok, and Facebook, fans can stay up to date with Bears' news. Fans can also download the Chicago Bears Official App for all information regarding the Bears (*Chicago Bears Official App*, n.d.). With access to schedules, news, tickets, and rewards, the Bears App allows fans to have everything they need in one place. Fans can also find digital wallpapers they can use on their phones and laptops to show their support for the team (*Digital Wallpapers*, n.d.). Fans can register to receive

emails from the organization. They can choose to receive communications such as a newsletter, ticket information, event and promotional information, and details about how to support the community (*Email Notifications*, n.d.). This targeted communication through email helps fans feel like a direct part of the community and increases the likelihood of their continued support for the Bears. To give kids an even more memorable experience, there is a "Kids Club" and a "Baby Bears" program in which kids can receive invites to club events and promotions (*Kids Zone*, n.d.). Focusing on young children expands the Bears fan base by helping the team connect with the new generation of growing football fans.

Although the organization has many strengths, some weaknesses hurt the team. The Chicago Bears' stadium, Soldier Field, has the lowest capacity in the NFL of 61,500 (Barbieri, 2024a). The Bears have been at Soldier Field since 1971, limiting their ability to sell more tickets since then. Their overall average attendance at home and away games in the 2023 season was the second lowest in the NFL with 65,381 (*NFL Attendance* - 2023). Although their average ticket price of $130 aligns with other NFL teams, their limited seating capacity only allows them to make around $78 million in ticket sales (Gough, 2024). While they tend to sell a lot of tickets quickly, they are limited in the volume they can sell due to their small and old stadium.

While their team value is one of the highest in the NFL, the Bears struggle when it comes to how much they spend compared to how much they are winning. Their win-to-player cost ratio, which compares the number of wins per player on a team's payroll compared to the rest of the NFL, is 45 (*NFL Team Valuations: #5 Chicago Bears*, 2023). This is very low and suggests that the Bears generally win 55% less than the average team per dollar spent. It shows their monetary investments in the team are currently not paying off. This value has been decreasing since 2016, and will not increase unless they improve.

With the resources the Chicago Bears have, they have several opportunities to increase their fan base and the organization as a whole. In the next few years, the Bears are planning to build a new fixed-roof stadium near the current Soldier Field (Mayer, 2024a). Due to the weather in Chicago, there is a limited amount of time the stadium can be used because of its lack of a roof. With the new stadium, they could host other events such as concerts and other sports all year long. This would allow Chicago to be a bigger part of the sports tourism industry, which could in turn bring in more revenue for the city and state. Although it would be a large investment of around $2 billion, the return on investment would have many positive impacts (Mayer, 2024a). In addition to creating many jobs, it would give residents of Chicago another opportunity to support the Bears and other sports or events that will be featured. Chicago is already a city with high levels of tourism, and this addition would only increase tourism and the benefits that come with it. Additionally, the Bears have the opportunity to rebuild their team with their new General Manager, Ryan Poles. After two seasons with the Bears, Poles has already begun to make changes that will make for a better team in the coming years with younger and more competitive players (*Ryan Poles*, n.d.). With his newer perspective in the role, his image for the team, including trades and draft picks, has the potential to not only make the team better but also bring in new fans to the organization.

Concerning the Bears' potential new stadium, other professional sports teams in Chicago could pose threats to the Bears. For example, the Chicago White Sox play baseball at Guaranteed Rate Field and the Chicago Red Stars play soccer at SeekGeek Stadium, and are both looking to move in the coming years to be more accessible for fans (Salao, 2024). The new White Sox stadium would cost around $1 billion of public funds, and the Red Stars are also looking for public funding for their move (Salao, 2024). This funding would come from the same source the

Bears are looking for to get financial support for their stadium, which could then affect plans to expand their seating capacity as well as the benefits that would come with it such as revenue increases. Additionally, while the Chicago Bears have a high franchise value and sell a large amount of tickets for home games, certain statistics hurt them in comparison to other NFL teams. For instance, in the 2023 season, the Bears had the 12th-highest average resale ticket price at $364, which was a $123 increase from the previous season (Barbieri, 2023). While loyal fans may continue to purchase increasingly expensive tickets, this hurts the chances of expanding to new fans or fans who may choose to spend their discretionary income elsewhere.

Team Performance SWOT

There are several players on the Chicago Bears that largely contribute to their performance on the field. In March 2023, the Bears acquired DJ Moore. As a wide receiver, he was a positive addition to the Bears' offense, recording 1,364 yards and 8 touchdowns in the 2023 season (Mayer, 2024b). His impressive performance led him to receive the Bears' Most Valuable Player and Offensive Player of the Year awards. With this reputation, he is seen as a player who can have a transformative impact on the Bears as a whole. On the defensive side, Jaylon Johnson is an integral part of the Bears' defense. Going into his fifth season with the Bears, he continues to improve in his statistics and was named the Bears' Defensive Player of the Year in 2023 (Hajduk, 2024). As a starting defensive back with four interceptions in 2023, his performance on the field has helped the Bears against their opponents. Another member of the Bears' defense, T.J. Edwards, has been a huge addition to the team. Entering his sixth season in the NFL, second in Chicago, he has been a leader on defense as a linebacker (Mayer, 2024c). Edwards started in every game and has the most total tackles on the team at 155, which is the

seventh highest in the NFL (*NFL Player Defense Stats 2023*, 2024). These three players are critical to the success of the team.

The Bears concluded their 2023 season with a losing record of 7-10. This is not new for them, though. The past three seasons have resulted in losing records, they have not made the playoffs since 2020, and have not won in the playoffs since 2011 (Barbieri, 2024b). The Bears struggle with their performance as a whole, but especially on offense. Most games in the 2023 season were played by Justin Fields, the first-string quarterback, with second-string Tyson Bagent starting one game and playing in four others. Against their opponents during the season, they had a total of 3,421 passing yards compared to the 4,245 yards their opponents had. Their total number of passing attempts was 513, whereas their opponents had 617. Their completion/attempt rate was 62.6%, compared to 66.5% of their opponents (*Team Stats*, n.d.). The Bears' lack of success in yardage and passing completions creates a negative domino effect: they do not get enough yards during their possessions, which hurts their chances of scoring, and their chances of winning diminish. The biggest weakness of the team now is at the quarterback position, as the Bears traded former starter Justin Fields during the offseason (Manzano, 2024), leaving a hole that will inevitably have to be filled with the first pick of the NFL draft.

It was evident throughout their struggle last season that changes were going to need to be made. The Bears have multiple opportunities to improve their performance for the 2024 season. Since they have the first draft pick, they can use this to their advantage to continue rebuilding their roster (Orr, 2023). Adding new players that will contribute to the team and bring out the best performances of the Bears' best players can be beneficial for them to succeed. With the new General Manager Ryan Poles, the Bears are using his experience as a tool to rebuild. Players such as DJ Moore, Montez Sweat, Keenan Allen, and D'Andre Swift, acquired under Poles'

management, have been key moves in becoming a better team (Jahns, 2024). The Bears' head coach, Matt Eberflus, has claimed that it is important to focus on individual improvements because they will contribute to the success of the team overall (Jahns, 2024). Bringing in new players who strengthen the team and their performance is instrumental for success.

With the upcoming draft, the Bears have a huge opportunity to continue adding to their offense. Since they traded their quarterback Justin Fields, drafting Caleb Williams as their new quarterback will give the Bears a chance to improve their offensive performance (Schein, 2024). Williams has an impressive background that can give the Bears the boost they need to become a stronger team. The Bears took advantage of the first free agency period by making risky trades and spending large amounts of money (Manzano, 2024). Combined with the other recent additions to the Bears, a star rookie quarterback would allow the offense to improve in passing and rushing yards, which will benefit the team's overall performance on the field.

While the Bears are focusing on their rebuilding, other NFL teams are doing the same. Every team wants to get stronger, which is a threat to the Bears and how their improvements will pay off. Many NFL teams throughout the league have done the same as the Bears as far as resetting their rosters - they have acquired several new players and traded several players to try to enhance their performance on the field (Shook, 2024). The Bears specifically took a risk and posed a threat to themselves by trading their quarterback to the Pittsburgh Steelers, making the Steelers' offense stronger (Manzano, 2024). The Bears are counting on a new quarterback to shift their performance positively, but if this does not happen, their performance on the field will continue to suffer. Additionally, there have been several changes to the Bears' roster to allow room for the most success possible for their potential new quarterback, Caleb Williams (NFL Nation Reporters, 2024). Heavily basing the roster on one person is a dangerous move when it is

unpredictable how they will perform with their team and against opponents. If the Bears' performance does not improve next season, and therefore these moves do not pay off, there could be consequences for the management and coaching staff, as well as players who are not performing well.

Predictive Player Performance Model

After evaluating the roster and current needs of the Chicago Bears, it is clear that the team has prepared themselves to draft a quarterback with the first overall pick. Three different predictive measures all show that Caleb Williams is the best statistical option, followed by Jayden Daniels. The other three player options (Drake Maye, JJ McCarthy, and Michael Penix) were lower performing in the models, though the quarterback draft class as a whole is very strong compared to previous years. The first model created was a linear regression mapping collegiate performance and a few dummy variables to NFL passer rating. Next, a logistic regression was created to map similar college variables to a boolean variable representing if the player was a bust or not, generating a formula that can be used to find the percentage chance that a new draft pick will be a bust. Finally, a cluster analysis was conducted to find similar prospects based on college performance. Caleb Williams is predicted to have a career passer rating of 93.2, has a bust probability of just 28%, and was in the same cluster as star quarterbacks like Patrick Mahomes and Andrew Luck. Jayden Daniels is predicted to have a passer rating of 90.9, has a bust probability of 34%, and was in the same cluster as dynamic college quarterbacks such as Cam Newton and Michael Vick.

To start, a data set of every first-round drafted quarterback from the last 30 years was collected, including numerous boolean dummy variables, non-statistical values such as height and years in college, and common statistical values from the quarterback's collegiate career. The

quarterback names are in Appendix I and the input variables collected are in Appendix II. Then, the career NFL passer rating was collected for each quarterback, and a value of 1 or 0 was assigned to a boolean variable representing if the player is regarded as a bust or not. The output variables for each quarterback are in Appendix III.

From this point, the dataset was narrowed down to remove outlier quarterbacks and variables that were less important. Outliers removed included Trey Lance, Carson Wentz, Joe Flacco, and Steve McNair, who all played college football at the FCS level and have less relevant collegiate statistics due to playing against and with generally worse competition. The next set of outliers removed included the four quarterbacks drafted in the last two seasons, as they have not had a long enough NFL career for a fair career passer rating to be determined. Additionally, each variable collected that was a "gross" value (passing yards, wins, passing touchdowns, etc.) was removed because we had already calculated a per-start or per-season value, which normalized the values to account for quarterbacks who had a longer career. Furthermore, the conference boolean variables were narrowed down to "SEC", "BIG10", and "Non-P5" because these were determined to be the most impactful categories (also because including the original 6 conference variables in which each quarterback has a value of "true" in exactly one column is not statistically valid for regressions). Yards/Attempt was also excluded because Adjusted Yards/Attempt was a better formula to capture the same measure, as it adds extra value for touchdowns and decreases for interceptions. This left the following variables: SEC, BIG10, Other, Suspended?, Transferred?, National Championships, Heismans, Height, Win%, Wins/Season, Starts, Years, PAttempts/Start, Completion%, Adjusted PYards/Attempt, TDs/Attempt, INTs/Attempt, PassRating, RYards/RAtt, RAtt/Start, and RTDs/start. This was further narrowed after considering which variables were already accounted for in other variables,

for example, the statistical measures all impacted and were reflected in passer rating and Heismans, wins/season and win% impacted national championships, etc. After performing an initial regression, it was determined that some additional variables were not significant and relevant in predicting NFL passer rating, such as college win%, rushing yards per attempt, and the boolean representing if a player was suspended. After running multiple regressions to determine the most effective combination of variables, the final input variables were as follows: SEC, BIG10, Other, Transferred?, Height, Wins/Season, Attempts/Start, Completion%, Adjusted Yards/Attempt, TDs/Attempt, INTs/Attempt, and RAtt/Start. These variables encompass competition and winning (conference and wins/season), if the player transferred (which is relevant as three of our five prospects transferred), height, passing volume, passing efficiency, scoring, turnovers, and rushing volume. Then, a regression was run to determine the coefficient weights and significance of selected variables in predicting NFL passer rating. The results of the regression are in Appendix IV.

While the R-squared and the significance of each variable other than completion% is not great, it is nearly impossible to generate a statistically significant model with a close fit given the dataset and the unpredictability of the NFL. So many factors go into determining NFL passer rating that no model can come close to predicting professional performance. However, what is important is that the direction of each coefficient makes sense. Positive coefficients (improving predicted passer rating) include if the player transferred, height, wins/season, attempts/start, completion %, touchdowns/start, and rushing attempts/start. It is fair to assume that a player transferring would be more successful in the NFL, as he would have been exposed to a second playbook and new coaching style and drills, allowing for more growth compared to a quarterback who was in one system his entire college career. Height, winning, throwing the ball

more, completing more passes, and throwing more touchdowns all are self-explanatory in that they should all correlate with a higher NFL passer rating. The other interesting positive coefficient was rushing attempts/starts, as one would expect quarterbacks who run less in college to have better skills throwing the ball, generally. However, it could be argued that more talented passers would have actually ran the ball more in college, as defenses would commit more to stopping the pass and would leave running opportunities. Negative coefficients include SEC, BIG10, "other" conference, adjusted yards/attempt, and interceptions/attempt. The SEC and BIG10 are generally regarded as more run-heavy leagues, while the PAC12, BIG12, and ACC typically have higher-scoring, pass-heavy games, which allows for better quarterback development. Playing in a non-power 5 conference against worse competition and throwing more interceptions should also correlate with worse NFL performance. The only confusing variable here is adjusted yards/attempt, but it could be seen that quarterbacks who have higher yards/attempt might be worse passers because they are carried by deep shot plays and talented wide receivers, while quarterbacks who can consistently complete difficult short throws would be more talented despite a lower adjusted yards/attempt.

After evaluating the reasonability of the model, it was tested on the last four quarterbacks drafted who were excluded from the initial regression. The results are as follows:

Name	Passer Rating (Pred)	Passer Rating
Anthony Richardson	82.55074015	87.3
Kenny Pickett	76.4875034	78.8
Bryce Young	74.25384987	73.7
C.J. Stroud	84.21145221	100.8

Despite the small sample size and short NFL careers for these four quarterbacks, it is clear that the model is relatively accurate in predicting at least these four passer ratings. C.J. Stroud had an

exceptional rookie season, posting the third-highest rookie passer rating ever. Other than that outlier, the other three quarterbacks were predicted within 5 rating points of their actual value.

The final step for the first model was to collect and input the relevant variables for the five prospects. After doing so, the model outputted the following results:

	Passer Rating (Pred)
Caleb Williams	93.19991818
Jayden Daniels	90.90214689
Drake Maye	87.89986839
JJ McCarthy	76.52771395
Michael Penix	88.58194293

From this, it is clear that the current quarterback class is one of the strongest in recent history. While there are at least four great options, Caleb Williams stands out ahead of the pack with a predicted passer rating of 93.2, which would put him at 22nd in NFL history, ahead of greats like Joe Montana and Brett Favre as well as current star Josh Allen ("NFL Passer Rating Career Leaders"). While this information is valuable, it only shows the potential statistical performance of the quarterback, without regard for longevity or winning. While the model was effective in predicting a small sample size, it would be valuable to incorporate further models to confirm our findings.

With the number one overall pick, it is important for a franchise to avoid drafting a "bust", or a player who simply does not meet expectations in the NFL. The Chicago Bears drafted quarterback Mitchell Trubisky with the 2nd pick of the 2017 NFL draft and Justin Fields with the 11th pick of the 2021 NFL draft. Both players are no longer with the team and were a wasted pick when quarterbacks like Patrick Mahomes or Deshaun Watson were available.

Sometimes it is important to draft a safer prospect who will have a solid career instead of taking a risk on a high-upside player that could be a complete bust.

The next model created was a logistic regression mapping the same input variables chosen to a boolean variable representing if the quarterback was a bust in the NFL or not. This generated a second set of coefficients that were used to determine the percent chance that a player would be a bust. The probability of every past quarterback being a bust was also generated as a result of the model, which allows us to test for effectiveness. To create the model, Excel's solver function was used to calculate the values of the coefficients that best aligned with the bust boolean, minimizing the error. The steps and process were copied from a Datamation blog post (Yen and Ticong). The top 7 most likely busts and top 7 least likely busts are as follows:

Name	Bust Prob	Name	Bust Prob
Mark Sanchez	0.884113263	Jay Cutler	0.268876383
EJ Manuel	0.882863904	Alex Smith	0.274621005
Ryan Tannehill	0.87772247	Justin Herbert	0.27510454
Christian Ponder	0.863495249	Aaron Rodgers	0.28979394
Carson Wentz	0.854536902	Baker Mayfield	0.297546041
Jason Campbell	0.845725619	Tua Tagovailoa	0.30497401
Daniel Jones	0.834523502	Patrick Mahomes	0.329103603

While this is not statistically perfect, as we are testing the model on inputs that were used to create it, it is clear that it is successful in predicting some of the biggest successes and busts in NFL history. None of the quarterbacks in the bust column had significant NFL success, while Aaron Rodgers and Patrick Mahomes are arguably the two best quarterbacks drafted in the first round this century, and the other five quarterbacks have all been solid starters and have led their

teams to playoff appearances. Running the five prospects through this model generated the following results:

Player	Bust Prob
Caleb Williams	0.281220464
Jayden Daniels	0.34672354
Drake Maye	0.717020313
JJ McCarthy	0.633550819
Michael Penix	0.312184693

From this, it is clear that Caleb Williams and Michael Penix are the safest picks, with Jayden Daniels not far behind. Drake Maye and JJ McCarthy are very risky prospects. Caleb Williams is the fourth-safest pick in the last thirty years, and Michael Penix is the seventh-safest (lowest bust probability). When combining this with the previous model's results, it can be seen that Caleb Williams has both a high "ceiling" (as a top 20 QB in passer rating) and a high "floor" (with a low chance of being a bust), while Michael Penix has a lower ceiling but a high floor. Jayden Daniels is slightly more risky, but has a similarly high ceiling to Caleb Williams, while Drake Maye and JJ McCarthy are riskier with a lower upside.

One final step that can help in evaluating prospects is finding "pro comparisons", or former and current NFL players that have a similar playstyle and career to a prospect. By performing a cluster analysis, clusters of pro comparisons can be formed for each prospect. For the cluster analysis, the entire dataset of 78 quarterbacks was considered, as well as the five prospects. Every boolean variable except suspended was included (as only four quarterbacks had a significant college suspension), and every statistic was included in its gross (not adjusted per attempt) amount. While we wanted to remove any differences between quarterbacks with similar abilities but different volumes of games played for our regressions, we want to consider volume

as important when grouping quarterbacks into clusters. After normalizing the values and generating a plot of values, it was determined that 9 clusters were most appropriate, which sorted quarterbacks into groups of about 8-10 similar players. The cluster of each prospect is as follows:

Cluster:	1	2	3	4	5
	Caleb Williams	Jayden Daniels	Drake Maye	JJ McCarthy	Michael Penix
	Trevor Lawrence	Anthony Richardson	Zach Wilson	Justin Fields	Kenny Pickett
	Justin Herbert	Trey Lance	Sam Darnold	Kyler Murray	Brady Quinn
	Patrick Mahomes	Baker Mayfield	Jameis Winston	Dwayne Haskins	Philip Rivers
	Deshaun Watson	Marcus Mariota	Blake Bortles	Josh Allen	Byron Leftwich
	Teddy Bridgewater	Robert Griffin	Ryan Tannehill	Mitchell Trubisky	Peyton Manning
	Andrew Luck	Cam Newton	Blaine Gabbert	Carson Wentz	
	Matt Leinart	Tim Tebow	JaMarcus Russell	Mark Sanchez	
	Ben Roethlisberger	Michael Vick	Jason Campbell	Alex Smith	
	Chad Pennington		J.P. Losman	Aaron Rodgers	
			David Carr	Akili Smith	
			Joey Harrington	Heath Shuler	
			Ryan Leaf		
			Kerry Collins		
			Trent Dilfer		

Cluster 1 contained our top prospect Caleb Williams, alongside some NFL stars such as Patrick Mahomes, Justin Herbert, and Deshaun Watson, and former stars like Andrew Luck and Ben Roethlisberger. In college, these players had well above-average passing stats with below-average seasons played, suggesting that they were very effective passers despite shorter college careers. In the NFL, this cluster has a total of 5 Super Bowl wins and 2 MVP awards, as well as an average NFL passer rating of 91. While Matt Leinart was generally regarded as a bust, and Chad Pennington and Teddy Bridgewater were less successful players with longer careers, each of the remaining quarterbacks was/are solid starters and have led their teams to the playoffs. Caleb Williams is in good company within this cluster, the average passer rating is close to our prediction from the linear model, and there is only one complete bust in this cluster.

Cluster 2 was the cluster with Jayden Daniels and many athletic quarterbacks who were less successful in the NFL. This cluster was characterized by well above-average rushing stats, below-average passing volume, and well above-average passer rating, suggesting that they were run-first quarterbacks who were still efficient when they did pass. Professionally, many of these

quarterbacks did not have incredibly successful careers, but Cam Newton did win an MVP and lead his team to a Super Bowl appearance.

Cluster 3 contained many of the top busts in recent history, including Ryan Leaf, Sam Darnold, J.P. Losman, and JaMarcus Russell. It is clear that this is not a good cluster for Drake Maye to be in, which matches the high bust probability from our logarithmic model. This cluster, despite having 14 quarterbacks, only has one Super Bowl win and no MVP awards, as well as an average passer rating of only 74.5. This cluster had an average value that was below the average of the dataset for every single input statistic.

Cluster 4 featured a wide range of quarterbacks, from future hall-of-famer Aaron Rodgers and current MVP candidate Josh Allen to recent busts like Dwayne Haskins and Mitchell Trubisky. While the professional careers of these players varied, on average, this cluster had lower volume passing stats, a higher passer rating and winning percentage, and a small number of games started, as well as four national championships. This suggests that players in this cluster were generally successful in their short careers and made an early jump to the NFL, with some succeeding greatly and others not panning out. This cluster is the riskiest in terms of variance between outcomes, with an average passer rating of 80.6, and only one quarterback with accolades (Aaron Rodgers). This aligns well with the high bust probability of JJ McCarthy.

The final relevant cluster contained Michael Penix and a few dynamic college passers, including the great Peyton Manning. Each quarterback in the cluster was very pass-heavy in college, with well below-average rushing stats. Additionally, this cluster had an average of 15 college starts more than the average of the dataset, representing an entire extra season of experience. While NFL outcomes were varied, each of these quarterbacks had plenty of collegiate experience by the time they were drafted. This matches with the lower bust probability

for Michael Penix due to his wealth of experience. The average NFL passer rating in this cluster was 82.8.

Overall, the three models created all suggest that Caleb Williams is by far the best prospect to draft in terms of on-field performance. The models all gave similar results despite some differences in chosen input variables and entries. The second-best option overall is Jayden Daniels, though Michael Penix is a slightly safer prospect with a similar prediction for passer rating and a more favorable cluster of comparison players. The primary limitations of the models were a relatively small sample size considering the number of input variables used, though further data collection would have been time-intensive and less relevant to include prospects from prior to 1994 (due to the natural evolution of the game of football over time) or prospects drafted in later rounds (because they would have naturally had less impressive collegiate stats). Also, in general, it is perhaps impossible to accurately model and predict NFL performance based on college variables, which is why busts happen every year despite teams spending millions of dollars on hiring scouts and analysts to help in the draft process.

Off-the-Field Considerations

In evaluating potential draft picks for the Chicago Bears based on their off-the-field considerations, several candidates stand out with unique qualities that could impact the team's community engagement and overall brand image positively. Jayden Daniels emerges as a strong candidate, aligning closely with the Bears' commitment to community engagement and philanthropy. His actions, such as utilizing his NIL partnership winnings to support the LSU athletics community and his humble demeanor after winning a Heisman, make him a natural fit for embodying the Bears' values (Ehrlich, 2023; Johnson, 2023). His engagement with youth programs and positive image as a role model suggests a seamless integration into the Bears'

culture. Furthermore, Daniels' character and leadership qualities have garnered widespread praise, making him a standout choice for the Bears' off-the-field initiatives.

Caleb Williams has been an early favorite for this year's draft however, several concerns have arisen over his personality and off-the-field behavior. In evaluating Williams as a potential draft pick for the Chicago Bears, his reputation as entitled and not fitting with the Bears' culture raises significant concerns. Rumors of him wanting partial ownership in any team that selects him, despite being a rookie, suggest a level of entitlement that may not align with the team's values. Additionally, his failure to deny these rumors and his history of leaking preferential team lists that exclude the Bears could lead to resentment from fans and teammates. Comparisons to UCLA QB Josh Rosen, who had a similar attitude and was traded multiple times before his career ended as a bust, further highlight the potential risks of selecting Williams. Concerns about his character, such as his habit of painting his nails and his behavior after losses, also raise red flags regarding his sportsmanship and alignment with the Bears' role model image. Ultimately, while Williams may possess talent on the field, his off-the-field behavior and attitudes could pose significant challenges for the Bears in terms of team cohesion, fan perception, and overall brand image. As the Bears prioritize community engagement and serving as role models, Williams' attitude and actions may not align with their values and could lead to negative impacts on the team's culture and reputation (Yanish, 2023).

Despite earlier concerns about entitlement and behavior, Williams has shown positive developments that make him a compelling candidate. His recent statements expressing willingness to play for any team, including the Bears, and his good rapport with the team during practice indicate a potential for growth (Taylor, 2024; Smith, 2024). While there is the risk that fans still hold previous statements, and the length of time that it took for Williams to address the

rumors against him, this effort is not going unnoticed. The Bears' environment, with its emphasis on community engagement and character-building, could be beneficial for Williams' development as both a player and a person. Additionally, Williams' youth and potential for growth could align well with the Bears' long-term vision, positioning him as a player who could not only contribute on the field but also positively impact the community off the field.

Drake Maye's character and leadership qualities also make him a strong contender. Described as having a good personality with leader-like qualities, Maye has garnered positive feedback from scouts, suggesting a good fit with the Bears' culture (Jahns, 2023). While his personality may not align with teams seeking a more outwardly passionate leader, his steady demeanor could provide stability and reliability, valuable traits in community outreach and engagement efforts. Maye's ability to lead by example and his dedication to his craft could make him a valuable asset to the Bears both on and off the field.

Michael Penix Jr. and JJ McCarthy add further depth to the Bears' considerations. Penix Jr.'s dedication, work ethic, and humble demeanor, along with his status as a role model for young athletes, make him a compelling choice (*Michael Penix Jr.'s Personality Unveiled: MBTI, Enneagram and More*, n.d.). His reputation for leadership and his positive impact on teammates and coaches alike could make him an invaluable addition to the Bears' locker room. McCarthy, on the other hand, brings a unique perspective to the table, described as a deep thinker and spirited person (Woods, 2022). His ability to approach situations with a thoughtful and analytical mindset could be an asset in community engagement efforts and team leadership.

In summary, each candidate offers distinct advantages and considerations for the Bears' off-the-field needs. While Jayden Daniels appears to be a natural fit based on his existing actions and character, Williams' potential for growth and recent positive developments make him a

compelling candidate. Drake Maye's steady leadership qualities, along with Michael Penix Jr.'s positive reputation and JJ McCarthy's unique perspective, add further dimensions to the Bears' considerations. Ultimately, the decision will depend on how the Bears prioritize their off-the-field initiatives and which candidate best fits their long-term vision and values. However, considering his accomplishments on the field, as well as his recent efforts to show growth off the field, these findings support Caleb Williams as the Bears' first draft pick.

Fan Engagement/Marketing Plan

To maximize fan engagement and support for Caleb Williams, the Chicago Bears will begin by launching a strategic social media campaign that leverages both the team's large social media presence and Williams' significant following. With 1.6 million Instagram followers, 3.6 million Facebook friends, and 2 million Twitter followers, the Bears have a robust online community that we can utilize. Williams, boasting 313K Instagram followers and a growing presence, will be a focal point of our campaign, which aims to showcase his personality, community involvement, and connection to the Bears brand. The campaign's objectives are to increase fan engagement and interaction with Williams and the Bears on social media, generate excitement and support for Williams among fans, highlight Williams' involvement in community programs and initiatives, and drive traffic to the Bears' website and merchandise store.

The tactical plan includes launching event teasers prior to the draft to build anticipation for Williams' selection by the Bears. Post-draft, a welcome campaign will be launched across all social media platforms, introducing Williams as the newest member of the Bears family. A player introduction series will familiarize fans with Williams, highlighting his journey to the NFL, college achievements, and off-the-field interests. Regular updates about Williams'

involvement in Bears Care programs and community initiatives will demonstrate his commitment to the Bears' values and the local community.

The campaign will also encourage fan interaction by posting polls, quizzes, and fan challenges related to Williams and the Bears, creating a sense of community and involvement among fans. Special edition merchandise featuring Williams' name, number, and signature will be promoted on social media, with exclusive discounts for fans, to drive sales and create a sense of exclusivity. Measurement and evaluation will include monitoring engagement metrics such as likes, comments, shares, and mentions, tracking follower growth and sentiment analysis to gauge fan response, and measuring website traffic and merchandise sales driven by the social media campaign. Overall, by leveraging the Bears' strong social media presence and Caleb Williams' growing popularity, we aim to create a dynamic and engaging campaign that not only introduces Williams to Bears fans but also strengthens the team's connection with its community and fan base.

To fully integrate Caleb Williams into the Bears community and cultivate fan support for him, we will capitalize on the Bears' deep-rooted commitment to community engagement, particularly their outreach programs aimed at children and the underprivileged (*Bears Care*, n.d.). By aligning Williams with these initiatives, we aim to position him as a beacon of inspiration and a role model for the youth in the Chicagoland area. Williams will actively engage in Bears Care youth outreach programs, community support, and charity events, demonstrating his dedication to making a positive impact in the community. He will visit schools, participate in scholarship programs for young cancer survivors, and support activities that empower young girls, such as the girl's flag football program. Through these engagements, Williams will not only connect with fans but also contribute meaningfully to the community and integrate with the rest

of the team. Moreover, Williams will be a pivotal figure in Bears Care initiatives supporting education, youth athletics, and medical research, with a specific focus on breast and ovarian cancer. His involvement in charity events and fundraisers will not only raise awareness for these causes but also showcase his genuine commitment to making a difference beyond the football field.

In addition to his involvement in community programs, Bears fans will have the exclusive opportunity to interact with Williams through special experiences, including meet-and-greets, autograph sessions, and other fan-focused events. These experiences will create a deeper bond between Williams and the fans, fostering a sense of loyalty and support for the player and the team. To further solidify Williams' presence in the Bears community, special edition merchandise featuring his name, number, and signature will be released, with a portion of the proceeds benefiting Bears Care programs. This initiative not only encourages fans to support Williams but also contributes to charitable causes, aligning with the Bears' philanthropic efforts. Furthermore, Williams will actively participate in community outreach initiatives, such as hospital visits, school engagements, and community center activities, where he will interact with fans and inspire young athletes. These interactions will help build a positive image of Williams and strengthen his connection with the Bears community, showcasing his commitment to making a meaningful impact off the field.

Lastly, by establishing partnerships with local organizations that share the Bears' community values, we will amplify Williams' impact and reach within the community. Organizations such as local food banks, afterschool programs, and recreational centers. These partnerships will provide additional opportunities for Williams to engage with fans and make a tangible difference in the lives of those around him, while also bringing attention and funding to

worthy causes. Incorporating Caleb Williams into the Bears community in this comprehensive manner not only elevates his image but also strengthens the Bears' connection with their fans and the community at large. By aligning Williams with the Bears' commitment to community engagement and philanthropy, we can create a mutually beneficial relationship that enhances the team's brand and impact beyond the realm of football.

Conclusion

Overall, the Chicago Bears are at a crucial point in their rebuilding efforts as they attempt to return to the Super Bowl for the first time in over a decade. The last two quarterbacks drafted by the team were unsuccessful and are no longer with the franchise, and new General Manager Ryan Poles has made great investments in strengthening the Bears roster. The final missing piece that can bring the team back to relevance is the next great quarterback, and the Bears are lucky enough to have the first overall draft pick in a very strong class. Despite some off-field concerns, the best option for the team is clearly Caleb Williams, who has shown great potential on the field and has demonstrated personal character growth off the field. Were he to be unavailable, we are confident that Jayden Daniels would be a great addition to the team as well, followed by Michael Penix. While Drake Maye has some positive off-field traits, both he and JJ McCarthy are far riskier options and do not have the upside of the other three prospects. We hope to connect Caleb Williams early and often with the Bears fan base and Chicago community through the Bears Care program and social media marketing.

Appendix I: Quarterbacks in Data Set (78)

Draft Year	Player
2023	Bryce Young
	C.J. Stroud
	Anthony Richardson
2022	Kenny Pickett
2021	Trevor Lawrence
	Zach Wilson
	Trey Lance
	Justin Fields
	Mac Jones
2020	Joe Burrow
	Tua Tagovailoa
	Justin Herbert
	Jordan Love
2019	Kyler Murray
	Daniel Jones
	Dwayne Haskins
2018	Baker Mayfield
	Sam Darnold
	Josh Allen
	Josh Rosen
	Lamar Jackson
2017	Mitchell Trubisky
	Patrick Mahomes
	Deshaun Watson
2016	Jared Goff
	Carson Wentz
	Paxton Lynch
2015	Jameis Winston
	Marcus Mariota
2014	Blake Bortles
	Johnny Manziel
	Teddy Bridgewater
2013	EJ Manuel
2012	Andrew Luck
	Robert Griffin
	Ryan Tannehill
	Brandon Weeden
2011	Cam Newton

	Jake Locker
	Blaine Gabbert
	Christian Ponder
2010	Sam Bradford
	Tim Tebow
2009	Matthew Stafford
	Mark Sanchez
	Josh Freeman
2008	Matt Ryan
2007	JaMarcus Russell
	Brady Quinn
2006	Vince Young
	Matt Leinart
	Jay Cutler
2005	Alex Smith
	Aaron Rodgers
	Jason Campbell
2004	Eli Manning
	Philip Rivers
	Ben Roethlisberger
	J.P. Losman
2003	Carson Palmer
	Byron Leftwich
	Kyle Boller
	Rex Grossman
2002	David Carr
	Joey Harrington
	Patrick Ramsey
2001	Michael Vick
2000	Chad Pennington
1999	Tim Couch
	Donovan McNabb
	Akili Smith
	Daunte Culpepper
	Cade McNown
1998	Peyton Manning
	Ryan Leaf
	Kerry Collins
1994	Heath Shuler
	Trent Dilfer

Appendix II: Input Variables Collected

Boolean Dummy Variables:

- Conference (1 if the player played in the conference, 0 if not)
    - SEC
    - BIG10
    - ACC
    - PAC12
    - BIG12
    - Other
- Suspended? (1 if the player was ever suspended and missed playing time during their college career)
- Transferred? (1 if the player transferred during their college career)
- National Championships (Only two players [Tim Tebow, Matt Leinart] in the data set won 2 national championships, so this was essentially a boolean variable)
- Heismans (No player in the data set won 2 Heismans, so this is a boolean variable)

Non-Statistical Variables:

- Height (inches)
- Win%
- Wins/Season
- Wins
- Losses
- Starts
- Years in College

Statistical Variables:

- Comp
- Passing Attempts
- Passing Attempts/Start
- Completion%
- Passing Yards
- Passing Yards/Attempt
- Adjusted Passing Yards/Attempt
- Passing TDs/Attempt
- Passing TDs
- INTs/Attempt
- INTs
- Passer Rating
- Rushing Attempts
- Yards per Carry
- Rushing TDs
- Rushing Attempts/Start
- Rushing TDs/start

Appendix III: Output Variables by Quarterback

Player	NFL Passer Rating	Bust?
Bryce Young	73.7	1
C.J. Stroud	100.8	0
Anthony Richardson	87.3	1
Kenny Pickett	78.8	1
Trevor Lawrence	85	0
Zach Wilson	73.2	1
Trey Lance	84.5	1
Justin Fields	82.3	1
Mac Jones	85.8	1
Joe Burrow	98.6	0
Tua Tagovailoa	97.1	0
Justin Herbert	95.7	0
Jordan Love	94	0
Kyler Murray	92.2	0
Daniel Jones	85.2	1
Dwayne Haskins	74.4	1
Baker Mayfield	88.1	1
Sam Darnold	78.3	1
Josh Allen	92.2	0
Josh Rosen	61.1	1
Lamar Jackson	98	0
Mitchell Trubisky	85.5	1
Patrick Mahomes	103.5	0
Deshaun Watson	100.8	0
Jared Goff	93.6	0
Carson Wentz	89.4	1
Paxton Lynch	76.7	1
Jameis Winston	87	0
Marcus Mariota	89.2	1
Blake Bortles	80.6	1
Johnny Manziel	74.4	1
Teddy Bridgewater	90.5	1
EJ Manuel	77.1	1
Andrew Luck	89.5	0
Robert Griffin	86.5	1
Ryan Tannehill	91.2	1
Brandon Weeden	76	1
Cam Newton	85.2	0

Jake Locker	79	1
Blaine Gabbert	71.7	1
Christian Ponder	75.9	1
Sam Bradford	84.5	1
Tim Tebow	75.3	1
Matthew Stafford	91	0
Mark Sanchez	73.2	1
Josh Freeman	77.6	1
Matt Ryan	93.6	0
JaMarcus Russell	65.2	1
Brady Quinn	64.4	1
Vince Young	74.4	1
Matt Leinart	70.2	1
Jay Cutler	85.3	0
Alex Smith	86.9	0
Aaron Rodgers	103.6	0
Jason Campbell	81.7	1
Eli Manning	84.1	0
Philip Rivers	95.2	0
Ben Roethlisberger	93.5	0
J.P. Losman	75.6	1
Carson Palmer	87.9	0
Byron Leftwich	78.9	1
Kyle Boller	69.5	1
Rex Grossman	71.4	1
David Carr	74.9	1
Joey Harrington	69.4	1
Patrick Ramsey	74.9	1
Michael Vick	80.4	1
Chad Pennington	90.1	0
Tim Couch	75.1	1
Donovan McNabb	85.6	0
Akili Smith	52.8	1
Daunte Culpepper	87.8	0
Cade McNown	67.7	1
Peyton Manning	96.5	0
Ryan Leaf	50	1
Kerry Collins	73.8	0
Heath Shuler	54.3	1
Trent Dilfer	70.2	0

Appendix IV: Linear Regression Results

Regression Statistics	
Multiple R	0.445291814
R Square	0.1982848
Adjusted R Sq	0.035224081
Standard Erro	11.3845813
Observations	72

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	12	1891.278314	157.6065261	1.216018188	0.294141525
Residual	59	7646.912798	129.6086915		
Total	71	9538.191111			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	12.67407499	76.10318182	0.166538043	0.868302979	-139.60804	164.9561901	-139.60804	164.9561901
SEC	-2.18320962	3.689487986	-0.59173783	0.556286868	-9.56585803	5.199438785	-9.56585803	5.199438785
BIG10	-8.76712966	7.343903273	-1.193797	0.237335336	-23.4622462	5.927986846	-23.4622462	5.927986846
Other	-0.92894287	3.432141748	-0.27065982	0.7875973	-7.79664264	5.938756906	-7.79664264	5.938756906
Transferred?	6.572741373	6.727342857	0.977018938	0.332548918	-6.88864059	20.03412334	-6.88864059	20.03412334
Height	0.219522671	0.890824945	0.246426273	0.806207632	-1.56301393	2.002059269	-1.56301393	2.002059269
Wins/Season	0.399883074	0.692101793	0.577780722	0.565610831	-0.98500942	1.784775564	-0.98500942	1.784775564
Attempts/Start	0.222883582	0.25579232	0.871345872	0.387097213	-0.28895567	0.734722832	-0.28895567	0.734722832
Completion%	0.8160202	0.450651758	1.810755612	0.075270975	-0.08573189	1.717772286	-0.08573189	1.717772286
Adjusted Yards	-1.13986331	2.763760866	-0.41243196	0.681517665	-6.67013603	4.390409406	-6.67013603	4.390409406
TDs/Attempt	25.92004996	198.6332584	0.130491994	0.896621099	-371.544182	423.3842819	-371.544182	423.3842819
INTs/Attempt	-150.524337	295.7521996	-0.50895424	0.612682448	-742.323121	441.2744476	-742.323121	441.2744476
RAtt/Start	0.517344708	0.39956373	1.29477395	0.200442472	-0.28218047	1.316869884	-0.28218047	1.316869884

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