



MISM6210

Business Proposal

TASTE OF VICTORY:
A VISUAL EXPLORATION OF HORSE
RACING'S CULINARY LANDSCAPE

Prepared by: Team 4

February 2023

Table of Contents

PHASE 1	3
PROBLEM STATEMENT:	3
<i>The Impact</i>	3
<i>A Visual Exploration of Culinary Innovation in Horse Racing</i>	4
SPORT SELECTION	4
<i>Kentucky Derby</i>	4
DATA GATHERING AND ANALYSIS PLAN.....	5
<i>Dataset 1: Kentucky Derby Barn List</i>	5
<i>Dataset 2: Derby Leaderboard</i>	6
<i>Dataset 3: Schedule of the Day</i>	6
<i>Dataset 4: Kentucky Derby Official Equibase Chart</i>	7
<i>Dataset 5: Kentucky Derby Post Position Draw Sheet (Complete)</i>	7
PROJECT SCOPE AND LIMITATIONS.....	8
<i>Project Scope:</i>	8
<i>Project Limitations:</i>	8
UNITS OF ANALYSIS AND METRICS.....	8
PHASE 2	9
DATA GATHERING AND WRANGLING FOR VISUAL ARTIFACT DESIGN.....	9
<i>Merged Datasets</i>	9
<i>Generated Data</i>	9
PLANNING VISUAL ARTIFACTS AND METRICS MAPPING.....	9
VISUAL ARTIFACTS.....	10
GENERAL ADMISSION ATTENDEE JOURNEY	11
FINAL DASHBOARD DESIGN.....	12
EXHIBITS	13
EXHIBIT 1: BRAINSTORMING	13
EXHIBIT 2: GENERAL ADMISSION POV.....	13

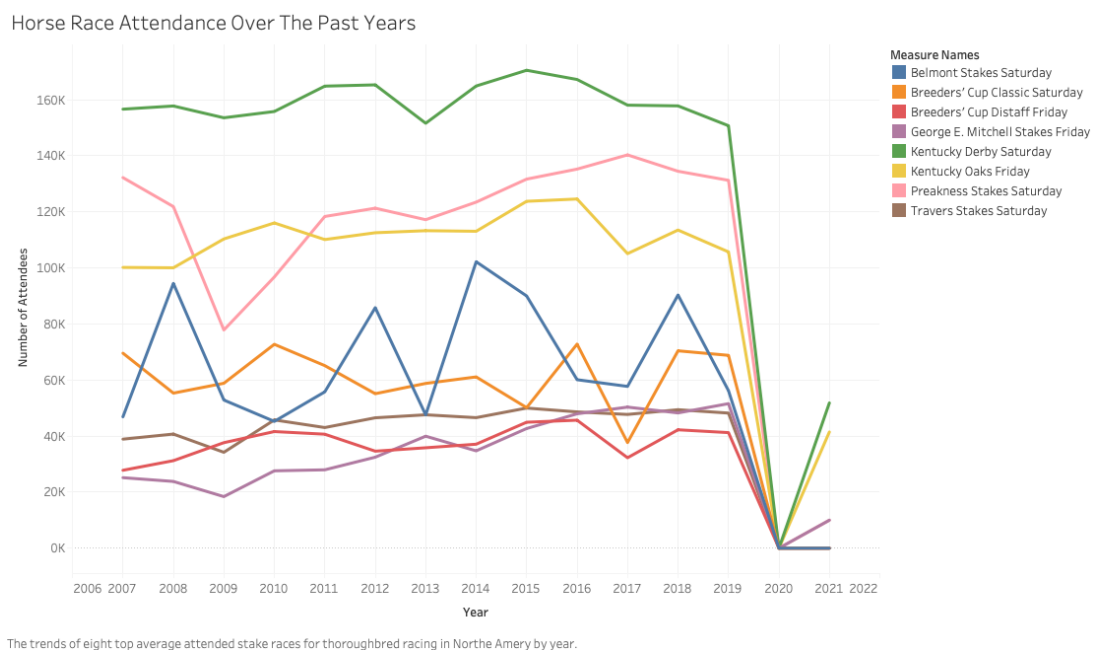
Phase 1

Problem Statement:

The declining popularity of horse race attendance in recent years due to increased competition from other forms of entertainment is threatening the industry's financial sustainability.

The Impact

This project aims to address the challenge of declining horse racing attendance, which has been a significant issue for the industry in recent years. Just in 2020, the industry lost over \$5 Billion compared to prior years¹ due to distinct factors including but not limited to COVID-19 and increased competition in the entertainment and sports industry combined with changing demographics. Horse racing events are designed to draw large crowds of spectators, who will not only spend money betting on the races but who will also pay for a variety of other products and services offered such as food, drinks, merchandise, etc., which makes horse racing a significant source of revenue. Furthermore, the horse racing industry in the United States is a major contributor to the country's economy. Not only does it generate approximately \$50 billion (about \$150 per person in the US (United States)), it also provides employment to almost one million people, and contributes \$38 million in direct compensation including salaries, wages and benefits (American Horse Council, n.d).² Thus, it is evident that the diminishing appeal of horse racing is a significant problem that could result in severe consequences for the industry and economy. Consequently, it is imperative for the industry to address this issue.



3

¹ Mills, K. (2020, September 18). Is Sport Horse Racing Dying Industry? Horse Racing Sense. <https://horseracingsense.com/is-sport-horse-racing-dying-industry/>

² American Horse Council. (2021). Economic Impact of the Horse Industry. Retrieved from <https://horsecouncil.org/resources/economics/>

³ (2021, September 23). American Thoroughbred Racing Top Attended Events. In Wikipedia. Retrieved: February 10, 2023, from https://en.wikipedia.org/wiki/American_thoroughbred_racing_top_attended_events

A Visual Exploration of Culinary Innovation in Horse Racing

The relationship between horse racing and the culinary arts plays a key role in enhancing the overall experience for attendees during the event. The selection of food and drink offerings, seating arrangements, and pricing are all factors that can influence the attendee experience. While the excitement of the races may sometimes detract from the focus on culinary offerings, a well-crafted food and drink program can add value to the racing experience, creating a unique and memorable event that appeals to a wide range of attendees. Including local cuisine, wine and spirits are some of the factors that can significantly impact attendee satisfaction. The goal of this project is to create a visual tool that enhances the horse racing experience for attendees by providing valuable insights and information on the races including past performance data and incentivizing them to engage in the event through discounted food offerings. By creating this innovative tool, we aim to attract a broader and more diverse audience while still retaining the loyalty of longstanding fans of the sport.

Sport Selection

This study will focus on **horse racing** as the specific sport chosen for the project for two vital reasons: its international prestige and global participation, and its strong connection to culinary arts. Horse racing is an extremely popular sport worldwide with a diverse fanbase that includes individuals from a wide range of socioeconomic backgrounds. Traditionally, the sport has been associated with the wealthy and elite because of the excessive cost of horse ownership and training, among other expenses. Nonetheless, this “elite” sport also attracts enthusiasts from diverse backgrounds including working-class individuals, retirees, and people from rural communities. Besides the historical and cultural significance, legal betting contributes to the sport's popularity. In fact, the legality of betting on horse racing has a long and established history tracing back to 19th century when the sport became prevalent in the U.S.⁴

For many attendees, the culinary experience is a crucial aspect of the horse racing event, as the food serves as a connector that enhances the socializing and atmosphere while creating a unique and memorable experience that is rare to find in other sports. Culinary arts and fan engagement are closely tied to horse racing, a sport with a rich culinary history that can be explored using data visualization and interactive dashboards.

Kentucky Derby

The Kentucky Derby is a specific horse racing event held annually on the first Saturday in May at Churchill Downs in Louisville, Kentucky. It is a major cultural event, the longest continually-held annual sporting event in the United States⁵ and is often called "the most exciting two minutes in sports." The Kentucky Derby is the first leg of the Triple Crown of Thoroughbred Racing, which also includes the Preakness Stakes and the Belmont Stakes. A Kentucky Derby party, on the other hand, is a social gathering that is typically held to watch the race and celebrate the event.

There are other countries that celebrate horse racing like is done in the United States. These countries include England, Australia, Ireland, Japan, and China, to name a few. There are numerous races that hold similar cultural significance to the Kentucky Derby in other countries, including The Epsom Derby, The Melbourne Cup, The Prix de l'Arc de Triomphe and the Dubai World Cup.

Noteworthy, not all horse racing events are as significant as those listed above. Like any other sport, there are many less popular events taking place around the world. While these smaller races may not have the same

⁴ Horseracing.net." (n.d.). Why horse racing is legal in the USA. Retrieved February 21, 2023, from <https://www.horseracing.net/us/why-horse-racing-is-legal-in-the-usa>

⁵ Churchill Downs Incorporated. (n.d.). Home. Retrieved from <https://www.churchilldownsincorporated.com/>

prestige or cultural significance as major events like the Kentucky Derby, they are still an important part of the horse racing industry, share similarities, and provide opportunities for both horses and jockeys to compete and for fans to enjoy the sport.

As already established, food and horse racing share a powerful connection and one way that food and drinks are linked to horse racing is through the creation of signature dishes and cocktails. For example, the Kentucky Derby is famous for its mint juleps⁶, and many racetracks have their own unique food offerings that are strongly associated with their events. In this study, the focus will be on **the general admission attendees** which is an important yet often ignored segment with the potential to enhance the overall event experience. While VIP attendees often receive special treatment and amenities, general admission attendees typically have a less glamorous experience (many of whom are attending the event and perceive it as a 'once-in-a-lifetime-experience'). Additionally, general admission attendees offer more flexibility in terms of testing, more willing to provide feedback/ participate in surveys, better in terms of scalability and practicality, and by gathering accurate data and insights into their preferences and needs, strategies can be generated for improving the food and beverage experience at events.

Data Gathering and Analysis Plan

The creation of this insightful dashboard will rely on the collection and creation of relevant data. This data will help gather vital information regarding horse race, finalist horses, finalist jockeys, current ranking, and current odds. By gathering this information, attendees will be able to decide which horse to vote for and potentially win food incentives. The following tables belong to Kentucky Derby's (statistics) official website for the year 2022 and show just a fraction of the entire dataset.

Dataset 1: Kentucky Derby Barn List⁷

Rank	Horse (State Bred)	ML Odds	Color	Barn
1	Mo Donegal (KY) Last Race: 1st 4/9 Wood Memorial Final Workout: 4/30 CD 4F :48.60 Record: 5-3-0-2-\$621,800 Sire: Uncle Mo	10-1 Trainer: Todd Pletcher (59-2-2-4) Owner: Donegal Racing (3-0-0-2) & Repole Stable (6-0-0-0) Jockey: Irad Ortiz Jr. (5-0-0-0)	Bay	35
2	Happy Jack (KY) Last Race: 3rd 4/9 Santa Anita Derby Final Workout: 4/30 Kee 1M 1:39.60 Record: 4-1-0-2-\$182,200 Sire: Oxbow	30-1 Trainer: Doug O'Neill (7-2-1-0) Owner: Calumet Farm (27-8-4-1) Jockey: Rafael Bejarano (11-0-0-0)	Bay	41
3	Epicenter (KY) Last Race: 1st 3/26 Louisiana Derby Final Workout: 5/1 CD 5F 1:01.00 Record: 6-4-1-0-\$1,010,639 Sire: Not This Time	7-2 Trainer: Steve Asmussen (23-0-2-2) Owner: Winchell Thoroughbreds LLC (8-0-0-1) Jockey: Joel Rosario (10-1-0-0)	Bay	38
4	Summer Is Tomorrow Last Race: 2nd 3/26 UAE Derby Last Workout: 4/19 Dubai 6F 1:11.80 Final Work: Sunday CD Record: 7-2-3-0-\$267,606 Sire: Summer Front	30-1 Trainer: Bhupat Seemar (0-0-0-0) Owner: Michael Hilary Burke & Negar Burke (0-0-0-0) Jockey: Mickael Barzalona (0-0-0-0)	Bay	Q2
5	Smile Happy (KY) Last Race: 2nd 4/9 Blue Grass Final Workout: 4/30 CD 4F :48 Record: 4-2-2-0-\$549,810 Sire: Runhappy	20-1 Trainer: Kenny McPeck (6-0-1-0) Owner: Lucky Seven Stable (0-0-0-0) Jockey: Corey Lanerie (5-0-1-0)	Dark Bay or Brown	6

⁶ ABC News. (2019, May 4). Mint julep, the iconic Kentucky Derby cocktail, has official recipe. Good Morning America. Retrieved from <https://www.goodmorningamerica.com/food/story/mint-julep-iconic-kentucky-derby-cocktail-official-recipe-62700367>

⁷ Kentucky Derby. (2022). Kentucky Derby at a glance. Retrieved from https://www.kentuckyderby.com/uploads/wysiwyg/assets/uploads/20220502_Kentucky_Derby_At_A_Glance.pdf

Dataset 2: Derby Leaderboard⁸

Horse	Points	Location	Trainer	Jockey	Exercise Rider	Churchill Barn	Stall	Training Time	Entry Gap
Epicenter	164	Churchill	Steve Asmussen	Joel Rosario	Roberto Howell	38	20	5:50 a.m.	2
Zandon	114	Churchill	Chad Brown	Flavien Prat		25			2
White Abarrio	112	Gulfstream Park	Saffie Joseph Jr.	Tyler Gaffalione		10			4
Mo Donegal	112	Churchill	Todd Pletcher	Irad Ortiz Jr.	Amelia Green	35		7:30 a.m.	3
Tiz the Bomb	110	Churchill	Kenny McPeck	Brian Hernandez Jr.	Danny Ramsey	6		730	1
Cyberknife	100	Churchill	Brad Cox	Florent Geroux	Katie Tolbert	22	3	730	2
Crown Pride (JPN)	100	Churchill	Koichi Shintani	Christophe Lemaire	Masafumi Matsuda	Q1		7:30 a.m.	1
Taiba	100	Santa Anita	Tim Yakteen	Mike Smith	Humberto Gomez	41 or 43			4
Simplification	74	Gulfstream Park	Antonio Sano	Jose Ortiz		41 or 43			4
Smile Happy	70	Churchill	Kenny McPeck	Corey Lanerie	Danny Ramsey	6		7:30 a.m.	1
Classic Causeway	66	Churchill	Brian Lynch	Julien Lejaroux	CJ Compton	40		530	3
Tawny Port	60	Churchill	Brad Cox	TBD	Edvin Vargas	22		7:30 a.m.	2
Barber Road	58	Oaklawn	John Ortiz	Reylu Gutierrez	Daniel Ortiz	46	2	7:30 a.m.	4
Un Ojo	54	Churchill	Ricky Courville	Ramon Vazquez	Clay Courville	4	6	7:30 a.m.	4
Early Voting	50	Belmont Park	Chad Brown	Jose Ortiz		25			2
Messier	40	Santa Anita	Tim Yakteen	John Velazquez	Humberto Gomez	41 or 43			4
Zozos	40	Churchill	Brad Cox	Manny Franco	Kelvin Perez	22	39	7:30 a.m.	2

Dataset 3: Schedule of the Day⁹

Race	Time	Race	Field	Live TV	Notes
	5:15 a.m.				Training Begins
	5:30 a.m.				Training Begins
	7:15 a.m.				Training Concludes
	7:15 a.m.				Harrow Break
	7:30 a.m.				All Box Offices Open
	7:45 a.m.				Derby Training
	8:00 a.m.				Derby Training Concludes
	8:45 a.m.				Anthem Sound Check
	9:00 a.m.				Admission Gates Open (\$85)
	9:00 a.m.			USA Network	Premier League from Churchill Downs
	10:00 a.m.				National Anthem (Steve Buttleman)
	10:00 a.m.				Garland Arrival (VIP Gate)
	10:00 a.m.				Garland Display (near Coady Photo)
1	10:30 a.m.	Mdn 120k, 3&up, 1 M	15	WAVE 3/FS2	
	10:30 a.m.				Derby Trophy Display (Paddock)
2	11:01 a.m.	OC 80000n1x, 3yo, 6 1/2 F	10	WAVE 3/FS2	
3	11:31 a.m.	Alw 127000n1x, f&m, 1 1/8 M (T)	10	WAVE 3/FS2	
	12:00 p.m.				USA Network on air 12-2:30 p.m.
	12:00 p.m.				Red Carpet Arrivals (VIP Gate)

⁸ Kentucky Derby. (2022). Kentucky Derby Leaderboard 2022. Retrieved from https://www.kentuckyderby.com/uploads/wysiwyg/assets/uploads/20220502_Kentucky_Derby_At_A_Glance.pdf

⁹ Kentucky Derby. (2022). Derby Day timeline. Retrieved from https://www.kentuckyderby.com/uploads/wysiwyg/assets/uploads/TIMELINE_-_Derby_Day_2022_.pdf

Dataset 4: Kentucky Derby Official Equibase Chart¹⁰

Last Raced	Pgm	Horse Name (Jockey)	Wgt M/E	PP	1/4	1/2	3/4	1m	Str	Fin	Odds	Comments
2Apr22 ¹² Tp ³	21	Rich Strike (Leon, Sonny)	126 b	20	17 ^{1/2}	18 ^{1 1/2}	18 ^{2 1/2}	15 ¹	3 ¹	1 ^{3/4}	80.80	wait,shft in,alter,bid
26Mar22 ¹² FG ¹	3	Epicenter (Rosario, Joel)	126 --	3	8 ¹	8 ^{1 1/2}	5 ¹	1 ^{Head}	1 ¹	2 ^{3/4}	4.10*	shook clear, caught
9Apr22 ⁹ KEE ¹	10	Zandon (Prat, Flavien)	126 --	10	13 ^{1/2}	11 ¹	9 ^{Head}	4 ^{1/2}	2 ³	3 ²	6.10	in tight early, kpt on
2Apr22 ¹⁴ GP ³	13	Simplification (Ortiz, Jose)	126 --	13	15 ^{1 1/2}	15 ³	15 ^{1/2}	11 ^{1/2}	4 ^{Head}	4 ^{Neck}	35.30	3-5w,7w1/4,stayd well
9Apr22 ⁸ AQU ¹	1	Mo Donegal (Ortiz, Jr., Irad)	126 --	1	19 ²	17 ^{Head}	17 ^{Head}	14 ^{1/2}	8 ¹	5 ¹	10.10	off slow, 10w, gaining
2Apr22 ¹² OP ²	14	Barber Road (Gutierrez, Reylyu)	126 b	14	20	19 ^{Head}	19 ^{1/2}	17 ^{1/2}	9 ^{Head}	6 ^{Head}	60.40	5-6w2nd,11w1/4,mildly
16Apr22 ⁹ KEE ¹	18	Tawny Port (Santana, Jr., Ricardo)	126 --	18	14 ²	14 ^{1/2}	14 ¹	7 ^{Head}	5 ^{Head}	7 ^{5 1/4}	80.50	ins-2p,improvd,flatnd
9Apr22 ⁹ KEE ²	5	Smile Happy (Lanerier, Corey)	126 --	5	9 ^{1/2}	9 ^{Head}	10 ¹	5 ¹	6 ^{Head}	8 ^{2 1/2}	14.10	in tight 3/8, bid,hung
2Apr22 ¹² Tp ¹	9	Tiz the Bomb (Hernandez, Jr., Brian)	126 --	9	16 ^{4 1/2}	16 ²	16 ²	16 ^{1/2}	11 ^{1/2}	9 ^{3 1/4}	31.00	off slow, belatedly
26Mar22 ¹² FG ²	19	Zozos (Franco, Manuel)	126 --	19	3 ^{Head}	3 ^{Head}	4 ¹	6 ^{1/2}	13 ^{1/2}	10 ^{1 1/4}	48.70	3w,chsds 4w2nd,fade5/16
2Apr22 ¹⁴ GP ¹¹	17	Classic Causeway (Leparoux, Julien)	126 --	17	12 ^{Head}	13 ^{1 1/2}	13 ^{Head}	13 ^{Head}	15 ²	11 ^{3/4}	78.90	step slow st,study 5/16
9Apr22 ⁶ SA ¹	12	Taiba (Smith, Mike)	126 --	12	6 ^{1/2}	5 ^{1/2}	7 ¹	8 ^{Head}	12 ¹	12 ^{1/2}	5.80	ins,4w1/2,tire,left ld
26Mar22 MEY ¹	7	Crown Pride (JPN) (Lemaire, Christophe)	126 hf	7	2 ^{1 1/2}	2 ¹	2 ^{Head}	3 ¹	10 ^{1 1/2}	13 ^{3/4}	17.50	disputed pace 3 w
9Apr22 ⁶ SA ³	2	Happy Jack (Bejarano, Rafael)	126 --	2	18 ^{Head}	20	20	19 ^{2 1/2}	17 ¹	14 ^{Head}	23.20	slow into stride,empty
9Apr22 ⁶ SA ²	6	Messier (Velazquez, John)	126 --	6	4 ^{1/2}	4 ^{1 1/2}	1 ^{Head}	2 ^{Head}	7 ^{2 1/2}	15 ^{3/4}	7.10	tracked, led, wilted
2Apr22 ¹⁴ GP ¹	15	White Abarrio (Gaffalione, Tyler)	126 --	15	10 ^{Head}	12 ^{1 1/2}	11 ¹	10 ^{Head}	14 ^{1 1/2}	16 ⁸	15.40	5w,7w2nd,9w1/4,faded
2Apr22 ¹⁴ GP ²	8	Charge It (Saez, Luis)	126 --	8	7 ²	7 ^{Head}	8 ^{1/2}	12 ^{Head}	16 ¹	17 ^{14 3/4}	16.00	steadied, forced in
2Apr22 ¹² OP ¹	16	Cyberknife (Geroux, Florent)	126 --	16	5 ¹	6 ^{1 1/2}	6 ^{1/2}	9 ^{Head}	18 ⁵	18 ^{14 1/4}	14.90	3-4p,5w2nd,caved 8w1/4
26Mar22 ¹² FG ³	11	Pioneer of Medina (Bravo, Joe)	126 --	11	11 ¹	10 ^{1/2}	12 ^{Head}	20	20	19 ^{7 1/2}	55.90	urged 4wbw,done early
26Mar22 MEY ²	4	Summer Is Tomorrow (Barzalona, Mickael)	126 hf	4	1 ^{1/2}	1 ^{1/2}	3 ^{1 1/2}	18 ¹	19 ⁶	20	36.80	pace inside, caved

Dataset 5: Kentucky Derby Post Position Draw Sheet (Complete)¹¹

Post Position	Horse	Jockey	TwinSpires.com Morning Line Odds By Mike Battaglia
1	Mo Donegal	Irada Ortiz Jr.	10-1
2	Happy Jack	Rafael Bejarano	30-1
3	Epicenter	Joel Rosario	7-2
4	Summer Is Tomorrow	Mickael Barzalona	30-1
5	Smile Happy	Corey Lanerie	20-1
6	Messier	John Velazquez	8-1
7	Crown Pride (JPN)	Christophe Lemaire	20-1
8	Charge It	Luis Saez	20-1
9	Tiz the Bomb	Brian Hernandez Jr.	30-1
10	Zandon	Flavien Prat	3-1
11	Pioneer of Medina	Joe Bravo	30-1
12	Taiba	Mike Smith	12-1
13	Simplification	Jose Ortiz	20-1
14	Barber Road	Rey Gutierrez	30-1
15	White Abarrio	Tyler Gaffalione	10-1
16	Cyberknife	Florent Geroux	20-1
17	Classic Causeway	Julien Leparoux	30-1
18	Tawny Port	Ricardo Santana Jr.	30-1
19	Zozos	Manny Franco	20-1
20	Ethereal Road	Luis Contreras	30-1
AE 21	Rich Strike	Sonny Leon	30-1
AE 22	Rattle N Roll	James Graham	30-1

¹⁰ Equibase Company LLC. (2022). Chart of the Kentucky Derby. Retrieved from <https://www.kentuckyderby.com/uploads/wysiwyg/assets/uploads/CHART - Kentucky Derby 2022 .pdf>

¹¹ Kentucky Derby. (2022). Kentucky Derby draw sheet. Retrieved from <https://www.kentuckyderby.com/uploads/wysiwyg/assets/uploads/20220502 Kentucky Derby Draw Sheet Final .pdf>

Project Scope and limitations

Project Scope:

- a. Develop an interactive and user-friendly dashboard that assists general admission attendees in selecting a winning horse to do a symbolic bet on (vote) for each race during the day.
- b. The dashboard will provide attendees with valuable information on the 20 horses and jockeys in the race, including past performance records, odds, and jockey rankings.
- c. Attendees who use the dashboard to bet on a winning horse will receive a discount on food and beverage offerings that correspond to the nationality of the winning horse if they bet correctly.
- d. While the race itself is short, it is also perceived as a day-long event and an opportunity for people to engage with the race and socialize. The project will focus on the General Admission attendees for the Kentucky Derby and the day-long event rather than the final race alone.
- e. While our project will primarily use the Kentucky Derby as an example of the broader horse racing industry, we will also draw on additional data sources and case studies as needed to provide a comprehensive analysis of the industry's current state and prospects.

Project Limitations:

1. The existence of other factors that impact attendance at the Kentucky Derby. The project is focused solely on the potential of using food to increase attendance for General Admission participants at the Kentucky Derby and does not consider other factors that may impact attendance, such as ticket prices, competition from other events, limited availability of accommodations or changes in consumer behavior.
2. Project's data will be limited to publicly available information of Kentucky Derby attendees and/or generated through chat ChatGPT, not primary research through surveys or focus groups.
3. Due to differences in event size, all potential variations in spectator behavior and spending patterns across different events may not be accounted for. Instead, the project will focus on analyzing data and patterns across Kentucky Derby to draw meaningful insights and recommendations.
4. The team will not be responsible for implementing any changes to the food and beverage offerings at the Kentucky Derby arena and will be limited to only providing recommendations based on their data analysis and dashboard design.

Units of Analysis and Metrics

Various aspects of the event that would be of interest to the general admission attendees were considered to identify the key metrics for the Kentucky Derby dashboard. The units of analysis were first identified within each unit of analysis, then specific metrics that are important to track were selected.

The key units of analysis in the dashboard include horses and jockeys as attendees will be interested in learning more about the jockeys riding each horse and the horse itself. As well, the general admission attendees are also a unit of analysis. Metrics included are:

- Number of attendees in the arena (general admission)
- Number of historical wins for each horse
- Years of experience for each jockey
- Number of horse points gathered from the "Road to Kentucky Derby,"
- Number of votes for each horse (updated in real-time)
- Foot traffic in celebration tents (number of people who visit the celebration tents over a given period of time)
- Wait times (measures the amount of time attendees have to wait in line to get their free snack or purchase additional food)

Phase 2

Data Gathering and Wrangling for Visual Artifact Design

Merged Datasets

Horse	Jockey	Post Position	winSpires.com Last Raced	Wgt	horse_rating	Odds	Day SI Record	Trainer	Owner	Barn	venue	surfa	Total	FirstPl	Seco	Th	Years	Home	Countr	Roa	Numbe	
Barber Road	Rey Gutierrez	14	30-1	2022-04-02	126	60-40	60.4	377	8-2-4-1	John Ortiz	WSS Racing L	46	HV	1	8	2	4	1	26	United States	37	100
Charge It	Luis Saez	8	20-1	2022-04-02	126	80-60	16	377	3-1-2-0	Todd Pletcher	Whisper Hill F	35	ST	0	3	1	2	0	20	Jamaica	62	400
Classic Causeway	Julien Leparoux	17	30-1	2022-04-02	126	40-15	78.9	377	6-3-1-1	Brian Lynch	Kentucky Wes	40	HV	1	6	3	1	1	8	Ireland	33	123
Crown Pride	Christophe Lemaire	7	20-1	2022-03-26	126	60-40	17.5	384	4-3-0-0	Koichi Shintani	Teruya Yoshid	Q1	ST	0	4	3	0	0	30	Mexico	65	325
Cyberknife	Florent Geroux	16	20-1	2022-04-02	126	100-80	14.9	377	6-3-2-0	Brad Cox	Gold Square L	22	HV	0	6	3	2	0	16	France	32	439
Epicercenter	Joel Rosario	3	7-2	2022-03-26	126	40-15	4.1	384	6-4-1-0	Steve Asmussen	Winchell Thor	38	ST	0	6	4	1	0	7	England	110	469
Ethereal Road	Luis Contreras	20	30-1	2022-04-06	126	60-40	19.8	362	7-1-1-1	D. Wayne Lukas	Julie Gilbert &	44	ST	1	7	1	1	1	20	Brazil	30	245
Happy Jack	Rafael Bejarano	2	30-1	2022-04-09	126	60-40	23.2	370	4-1-0-2	Doug O'Neill	Calumet Farm	41	ST	1	4	1	0	2	22	Ireland	118	948
Messier	John Velazquez	6	8-1	2022-04-09	126	60-40	7.1	370	6-3-3-0	Tim Yakteen	SF Racing, Sta	37	ST	1	6	3	3	0	13	United States	70	250
Mo Donegal	Irad Ortiz Jr.	1	10-1	2022-04-09	126	60-40	10.1	370	5-3-0-2	Todd Pletcher	Donegal Racir	35	ST	0	5	3	0	2	2	Puerto Rico	123	1000
Pioneer of Medina	Joe Bravo	11	30-1	2022-03-26	126	60-40	55.9	384	6-2-1-2	Todd Pletcher	Sumaya U.S.	55	HV	0	6	2	1	2	12	United States	45	400
Rattle N Roll	James Graham	22	30-1	2022-04-02	126	60-40	35	376	7-2-0-1	Kenny McPeek	Lucky Seven S	6	ST	1	7	2	0	1	27	United States	25	243
Rich Strike	Sonny Leon	21	30-1	2022-04-02	126	40-15	80.8	377	7-1-0-3	Eric Reed	RED TR-Racin	17	ST	1	7	1	0	3	10	United States	26	135
Simplification	Jose Ortiz	13	20-1	2022-04-02	126	120-95	35.3	377	7-2-2-3	Antonio Sano	Tami Bobo	42	HV	0	7	2	2	3	25	United States	40	384
Smile Happy	Corey Lanerie	5	20-1	2022-04-09	126	100-80	14.1	370	4-2-2-0	Kenny McPeek	Lucky Seven S	6	ST	1	4	2	2	0	11	France	90	300
Summer is Tomorrow	Mickael Barzalno	4	30-1	2022-03-26	126	60-40	36.8	384	7-2-3-0	Bhupat Seemar	Michael Hilan	Q2	ST	1	7	2	3	0	13	Peru	100	743
Taliba	Mike Smith	12	12-1	2022-04-09	126	60-40	5.8	370	2-2-0-0	Tim Yakteen	Zedan Racing	37	HV	0	2	2	0	0	6	Panama	40	311
Tawny Port	Ricardo Santana Jr.	18	30-1	2022-04-16	126	100-80	80.5	363	5-3-1-0	Brad Cox	Peachtree Sta	22	HV	0	5	3	1	0	1	Panama	32	214
Tiz the Bomb	Brian Hernandez Jr.	9	30-1	2022-04-02	126	80-60	31	377	8-5-1-0	Kenny McPeek	Magdalena R	6	ST	0	8	5	1	0	17	United States	54	375
White Abarrio	Typer Gaffalione	15	10-1	2022-04-02	126	80-60	15.4	377	5-4-0-1	Saffie Joseph Jr.	C2 Racing Sta	10	HV	0	5	4	0	1	5	Panama	40	298
Zandon	Flavien Prat	10	3-1	2022-04-09	126	60-40	6.1	370	4-2-1-1	Chad Brown	Jeff Drown	25	ST	0	4	2	1	1	12	France	50	593
Zozos	Manny Franco	19	20-1	2022-03-26	126	80-60	48.7	384	5-1-2-0	Brad Cox	Barry & Joni B	22	ST	0	5	1	2	0	11	Mexico	30	191

Generated Data

Time	Number of Attendees	Celebration Tents	Estimating Waiting Time (Mins)	Number of People in Line
10am	15,000	Derby Diner	45	60
10:30am	30,000	Paddock Pantry	20	30
11:00am	36,000	Winner's Circle Café	15	19
11:30am	45,000	Jockey's Joint	60	68
12:00pm	68,000	Furlong Food	25	25
12:30pm	100,000	Tripe Crown Grill	5	10
1:00pm	120,000	Turfside Tavern	5	10
1:30pm	125,000	Starting Gate Bistro	40	35
2:00pm	140,000	Saddle Club Snacks	35	30
2:30pm	145,000	Railside Refreshments	15	19
3:00pm	147,000	Horsey Hot Dogs	10	15
3:30pm	150,000			

Planning Visual Artifacts and Metrics Mapping

1. **Line graph** will be displayed to show the number of **attendees** in the stadium over time. The graph will update every 30 minutes, from 10 am to 3:30 pm, enabling attendees to monitor the number of people at the event throughout the day. This real-time data visualization allows attendees to see how many people are enjoying the event with them.
2. **Bar chart of Historical wins for each horse.** This metric provides attendees with information on each horse's past performance, which can be a useful factor in predicting future success. By presenting the number of historical wins in a clear, visual format, attendees can quickly compare each horse's track record and make informed decisions when placing votes on their favorite horse.
3. **Jockey performance bar chart** is provided, which compares the jockeys' backgrounds and enables attendees to make better-informed decisions when voting for their favorite horse-and-jockey pair. By hovering over a jockey's bar, attendees can view detailed information about them, such as their country of origin, duration of their practice, and the total number of wins they have achieved. This visual aid provides a comprehensive overview of the jockeys' skills and assists attendees in predicting which jockey might perform best during the race.
4. **"Road to the Kentucky Derby"** bar chart is available, which informs attendees about each horse's performance leading up to the Kentucky Derby. This metric can be a useful factor in predicting each

horse's success in the final event. Attendees can compare each horse's standing and see which ones have qualified for the final event with the most points.

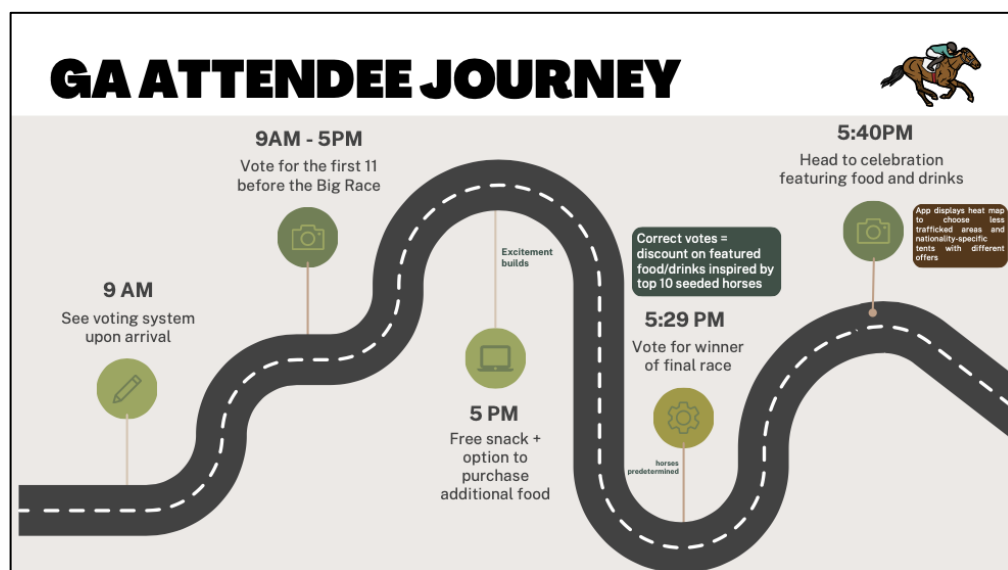
5. **Bar chart of Number of bets placed on each horse.** This metric provides attendees with information on the popularity of each horse among voters, which can be a useful factor in predicting the odds for each horse to win. Attendees can compare each horse's level of support and see which ones are the most popular picks. This chart can be updated in real-time as new votes are placed, allowing attendees to track the popularity of each horse leading up to the race.
6. **Heat map: Wait times at celebration tents.** This metric provides attendees with information on the busiest celebration tents and longest wait times for food and drinks, which can be a useful factor in planning their food purchases and minimizing wait times. Attendees will identify the areas with the shortest and longest lines and make informed decisions on where to go to get their food. The heat map can be updated in real-time as wait times change, allowing attendees to make informed decisions throughout the event.

Visual Artifacts



General Admission Attendee Journey

1. Attendees arrive at the horse racing event and are given information about the voting system.
2. They access the online voting system and select the horse they think will win for each of the 13 races leading up to the Big Race.
3. If they bet for the right horse in the first 13 races, they receive a free snack food. They may also choose to purchase additional food while picking up their free snacks.
4. As the event builds up to the Big Race, attendees feel more excited and invested in the outcome.
5. All 20 horses for the Big Race are predetermined. Voting starts one hour before the race and attendees have up to 1 minute before the race starts to bet on which horse they think will win.
6. If they bet correctly on the winning horse, they receive a discount on food or drink items inspired by the top 10 seeded horses in the race.
 - a. Winning bettors receive a coupon (25% discount up to \$20 per attendee) that can be applied to one of the featured cocktails or foods, and they can choose which one they want to enjoy.
7. The featured food and drinks are served in a **celebration tents** (managed by the hosts of the race), where attendees can enjoy the atmosphere and socialize with other racegoers.
8. Before heading to the **celebration tents**, attendees will use the app to check the heat map, which displays the busiest areas and wait times at the celebration tents. This will allow them to choose less trafficked areas and nationality-specific tents with different offers.
9. Attendees who didn't win the bet can still enjoy the special featured foods and drinks, but they have to pay full price.



General Admission Attendee Journey

Final Dashboard Design



Notes:

Initially we had proposed 2 bar charts: **Number of bets placed on each horse** and **historical wins for each horse**; however, for the final dashboard we went for a **butterfly plot**. On the right-hand side, each horse's history of wins is presented in a clear, visual format, allowing attendees to quickly compare each horse's past performance. On the left-hand side, the number of bets placed on each horse is displayed, giving attendees an idea of each horse's popularity. This chart updates in real-time, with each new bet made by an attendee appearing on the bar charts. Finally, this visual aid helps attendees gauge the level of support each horse has and see which ones are the most popular picks.

Exhibits

Exhibit 1: Brainstorming

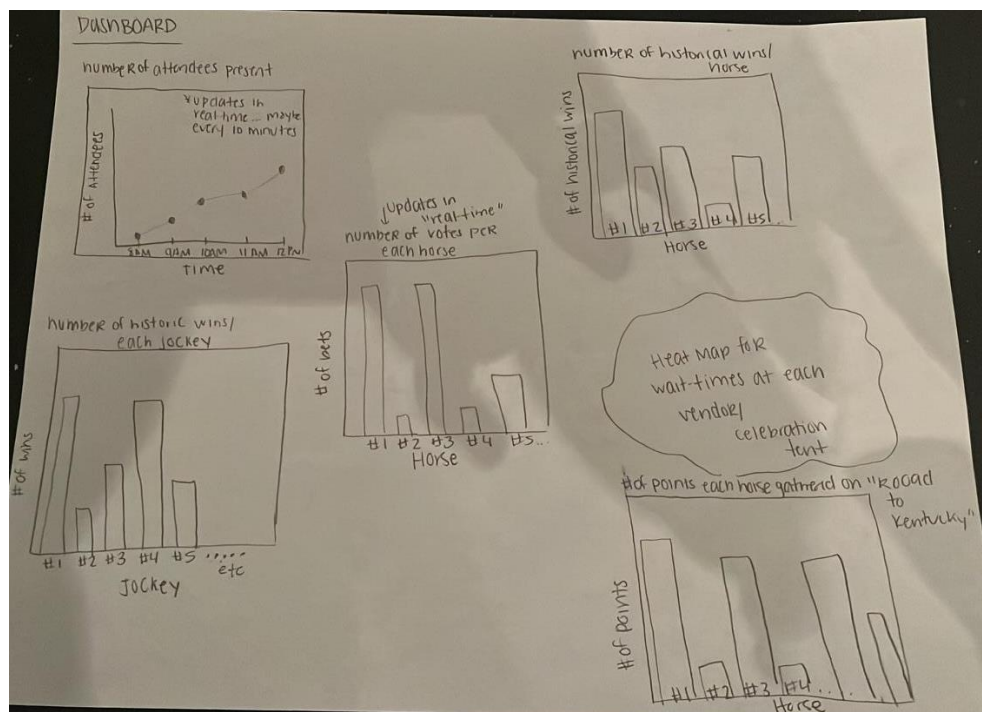


Exhibit 2: General Admission POV¹²



Figure 1: General Admission Picnic Blanket

¹² No Home Just Roam. (2019, May 5). Talk Derby to Me: Our Day at the 2019 Kentucky Derby. Retrieved from <https://nohomejustroam.com/talk-derby-to-me-our-day-at-the-2019-kentucky-derby/>

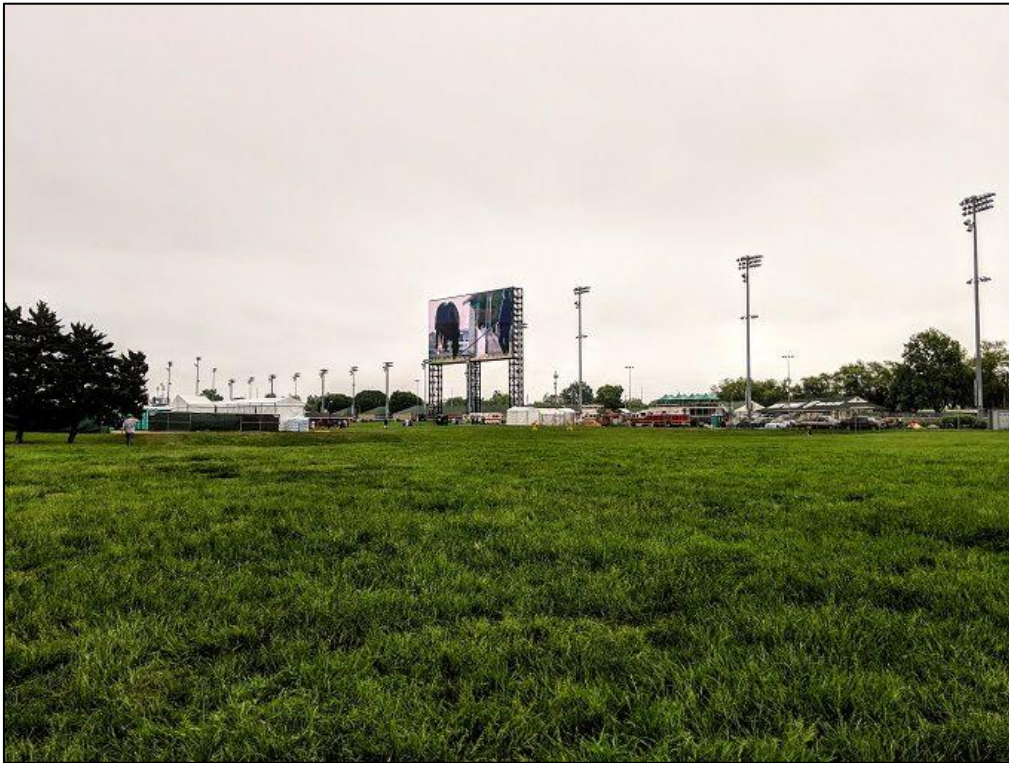


Figure 2: Infield at Churchill Downs

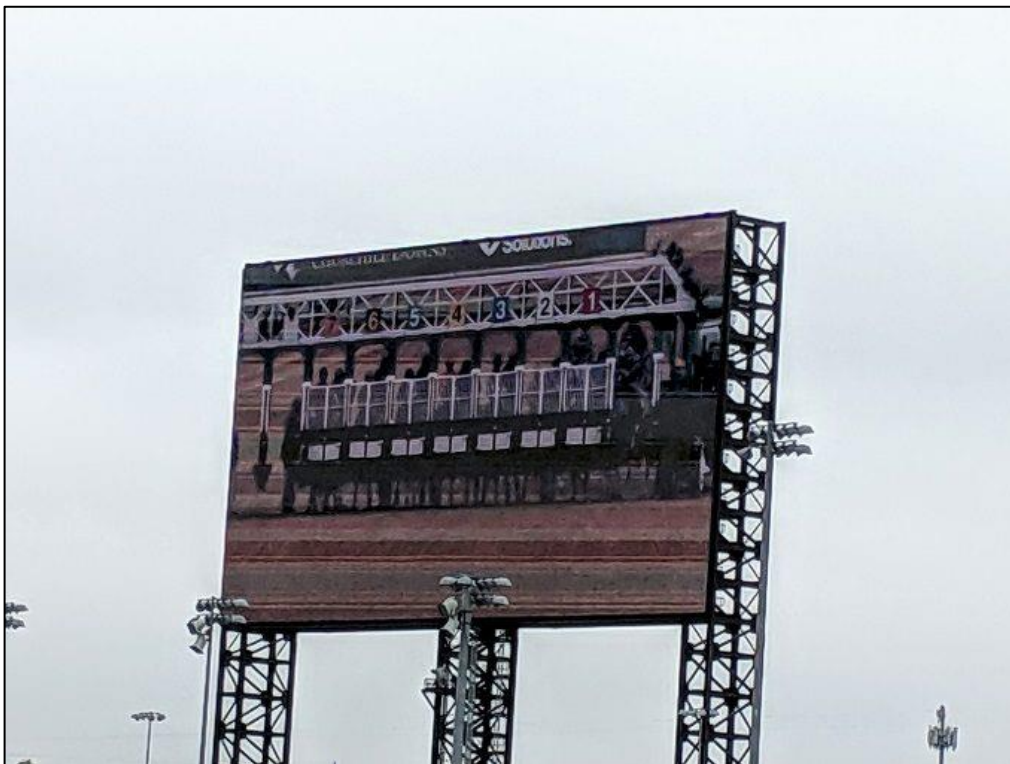


Figure 3: World's Largest 4K Video Screen for GA

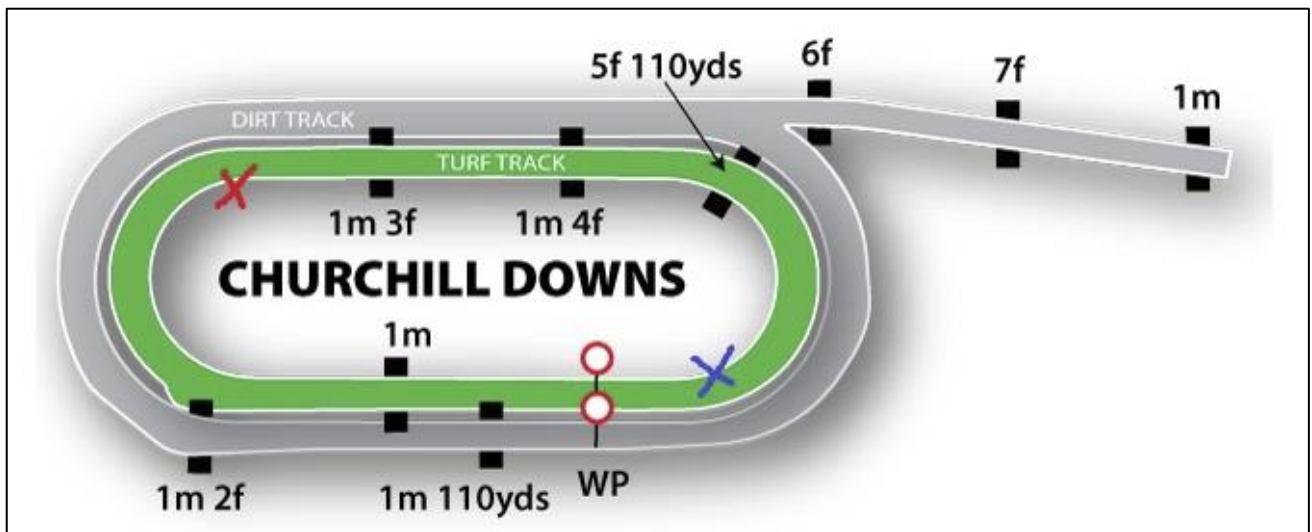


Figure 4: Churchill Downs Racetrack Layout



Figure 5: Kentucky Derby Infield View



Figure 6: Wagering Windows