



Verde Brewing Co Data

Phase 2: Progress Towards Data Analysis

A large green triangle is located in the bottom right corner of the slide.

Agenda

1. Team Introduction
2. Progress
3. Data Aggregation and Cleaning
4. Formulated Hypotheses
5. Summary of sales, category,
and product
6. Market Basket Analysis
7. Sales Analysis
8. Recommendation

Progress

- Access to data (Square)
- Our focus
- Statement of work
- Extract data
- Download Data
- Data exploration

Collecting the Data

- Square POS
- Verde Brewing Facebook
- Data from the past 2 years

Date	Time	Category	Item	Qty	Price Point	Gross Sal	Discounts	Net Sales	Count	T
2024-10-04	21:52:55	Hot Dogs	Elote Dog	1	Regular	10	-1.5	8.5	1	
2024-10-04	21:52:55	Beer	Plum Sour	1	Pint	7	-1.05	5.95	1	
2024-10-04	21:52:55	Beer	Watermelon	1	Pint	7	-1.05	5.95	1	
2024-10-04	21:21:56	Beer	Gold Buckle	2	Pint	12	-1.8	10.2	2	
2024-10-04	21:21:56	Beer	Wildflower	1	Pint	8	-1.2	6.8	1	
2024-10-04	21:21:56	Hot Dogs	Stadium Dog	1	Regular	10	-1.5	8.5	1	
2024-10-04	21:21:56	Beer	Wildflower	1	Pint	8	-1.2	6.8	1	
2024-10-04	21:21:56	Beer	Strong Lager	1	Pint	7	-1.05	5.95	1	
2024-10-04	21:21:56	Beer	Wildflower	1	Pint	8	-1.2	6.8	1	
2024-10-04	21:21:56	Beer	Wildflower	1	Pint	8	-1.2	6.8	1	
2024-10-04	21:21:56	Beer	Strong Lager	1	10 oz	5	-0.75	4.25	1	
2024-10-04	21:21:56	Beer	Gold Buckle	2	Pint	12	-1.8	10.2	2	
2024-10-04	21:21:56	Beer	Gold Buckle	1	10 Oz	4	-0.6	3.4	1	
2024-10-04	21:21:56	Beer	Lite Lager	1	Pint	6	-0.9	5.1	1	
2024-10-04	20:28:18	Beer	Plum Sour	1	Pint	7	-1.05	5.95	1	
2024-10-04	20:28:18	Beer	Dark Lager	1	Pint	6	-0.9	5.1	1	
2024-10-04	20:28:18	Beverage	Soda	1		3	-0.45	2.55	1	
2024-10-04	20:28:18	Beverage	Soda	1		3	-0.45	2.55	1	
2024-10-04	20:25:33	Beer	Watermelon	1	Pint	7	-1.05	5.95	1	
2024-10-04	20:25:33	Sandwich	Roast Beef	1	Regular	16	-2.4	13.6	1	
2024-10-04	20:25:33	Beer	Watermelon	1	Pint	7	-1.05	5.95	1	
2024-10-04	20:25:33	Beer	Watermelon	1	Pint	7	-1.05	5.95	1	
2024-10-04	20:25:33	Beer	Watermelon	1	Pint	7	-1.05	5.95	1	
2024-10-04	20:01:43	Beer	Watermelon	2	Pint	14	0	14	2	
2024-10-04	19:49:35	Beer	Redneck Rod	1	Pint	8	0	8	1	
2024-10-04	19:49:35	Sandwich	Chicken Sanc	1	Regular	13.5	0	13.5	1	
2024-10-04	19:49:35	Beer	Redneck Rod	2	Pint	16	0	16	2	
2024-10-04	19:49:31	Beer	On the Trail	1	Pint	8	0	8	1	
2024-10-04	19:49:31	Beer	Gold Buckle	1	Pint	6	0	6	1	
2024-10-04	19:49:31	Apps/Nachos	Salad	1	Add Chicken	13.5	0	13.5	1	
2024-10-04	19:49:31	Sandwich	BBQ Pork	1	Regular	14	0	14	1	
2024-10-04	19:49:31	Beer	On the Trail	2	Pint	16	0	16	2	
2024-10-04	19:49:12	Beer	Dark Lager	1	Pint	6	0	6	1	
2024-10-04	19:49:12	Beer	Watermelon	1	Pint	7	0	7	1	

Post Date	Item
10/2	On the Trail Pale Ale
9/27/24	Meatball Sub
9/23	Wildflower
9/19	Meatball Sub
9/19	Wildflower
9/10	Smokey Rye Lager
8/13	Gold Buckle
8/6	Lite Lager
7/30	Wildflower
7/22	Gold Buckle
7/1	Cans
6/12	Cans
6/4	Redneck Rodeo
5/30	Chicken Sandwich
5/30	Spring Gold
4/9	Spring Gold
3/19	Cans
3/5	Rye Lager
3/5	Nachos
2/20	Gold Buckle
2/6	Nachos
2/6	Gold Buckle
2/1	HHB Nectron Hazy IPA
12/18	Cans
12/13/23	Nachos
12/7	A Flight
12/7/23	Blue Sky Hazy
12/6	Blue Sky Hazy
11/28	Cans
11/28/23	Dark Lager
11/15	Blackberry Sour

Cleaning the Data

01

Naming Discrepancies In Square

(Chile Dog vs Chili Dog, bb sour vs Blackberry Sour)

Exported data to Excel File, and used find and replace to correct the values.
For the purpose of analyzing sales data, variations of a sale (keg, pint, happy hour) were also eliminated and referred to just by the product name

02

Aligning Post Data Items with Sales Data Items

(Spicy Chorizo Nachos → Nachos)

Some items that were posted about had different names than the ones that were listed in the Square data.

Hypotheses

Sales Trend

H1: Effect of Social Media Post

- Hypothesis: Increased post frequency = Higher average net sales (after 2 days)
- Rationale: Drive customer awareness + foot traffic -> potential sales strike
- Variables: post frequency, average net sales, day relative to posts

H2: Sales Variable by Categories and Hours

- Hypothesis: Sales volume varies by hour and specific categories
- Rationale:
 - Customer fluctuates throughout the day
 - Different product demand at different time
- Variables:
 - Hour of sale
 - Sales volume
 - Product categories

Hypotheses

Market Basket Analysis

H1: Association Between Beer Types and Food Pairings

- **Hypothesis:** Certain beer types are frequently purchased with specific food items
- **Rationale:** Customers may have preferences for specific beer and food combinations, which affect purchase behaviors
- **Variables:** beer types, food items, quantity sold

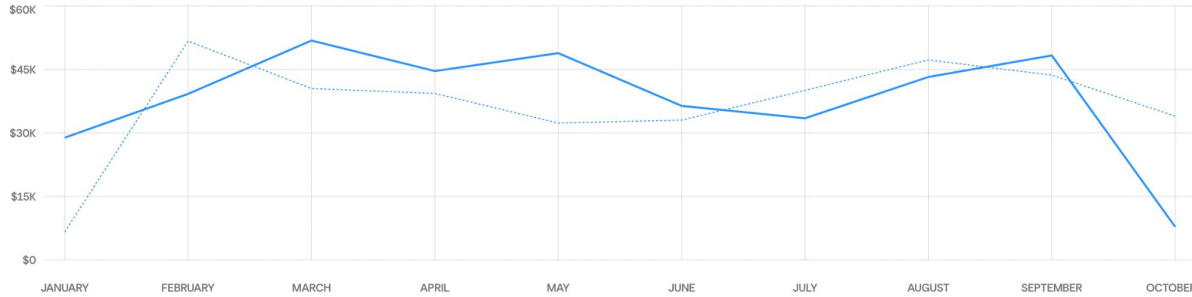
H2: Sales of Beer vs. Other Categories

- **Hypothesis:** Beer categories generates significantly higher net sales compared to other product categories
- **Rationale:** The company's core product is brewed beer (competitor: Low Places Bar and Grill)
- **Variables:** Category (Beer vs. Other), Net Sales

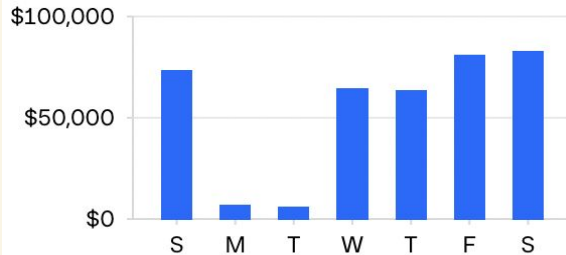
Summary of Sales, Category, and Product

GROSS SALES

Jan 01 – Oct 04, 2024 **\$382,595.77** Mar 29 – Dec 31, 2023 **\$368,441.86** ▲ 3.84%



DAY OF WEEK

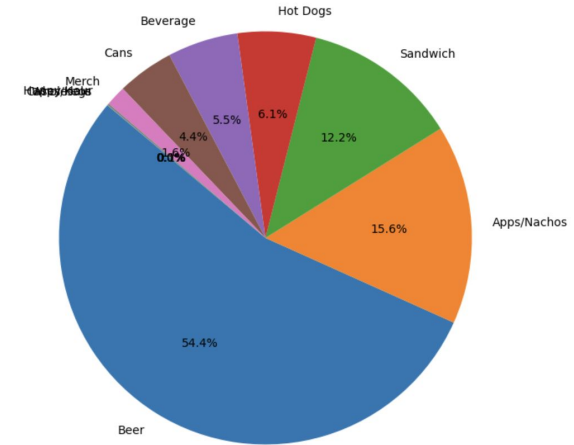


- Square (POS)
- Data spans from (2023-01-01) (2024-10-04)

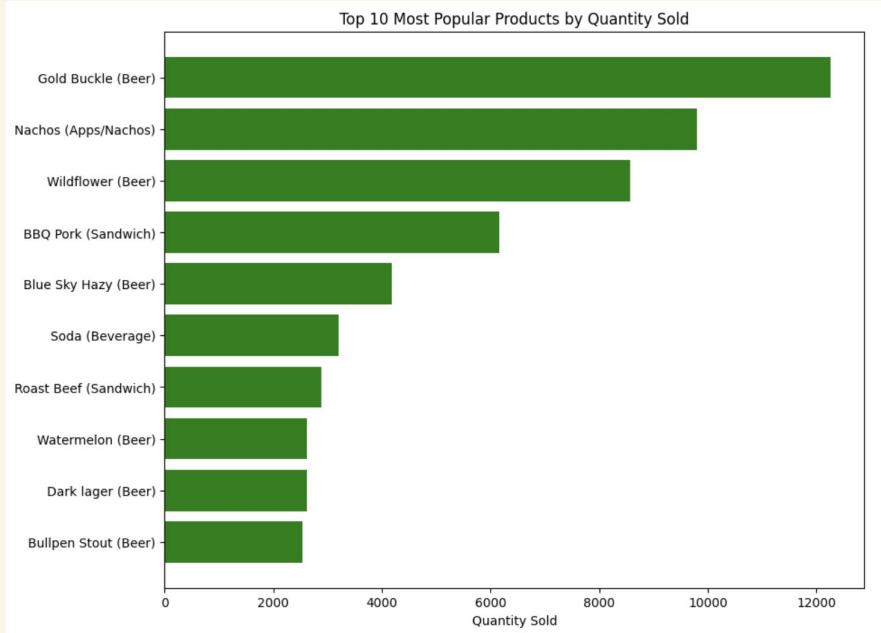
Challenge: Mon-Tues low activity (just opened these days)

Resolve: Remove Mon-Tues, compare before and after of other days.

Sales Distribution by Category



Summary of Sales, Category, and Product pt2



- Data spans from (2022-10-01) - (2024-10-04)
- Top: optimize marketing, inventory management, pricing strategies
- Lowest: either invest innovation resources in them or remove them.

	Item	Category	Qty
1	\$1000 Bfl	Merch	1
106	Smokey Rye Lager 1/6 Keg	Cases/Kegs	1
88	Raspberry Sour	Cases/Kegs	1
68	Keg deposit	Merch	1
67	Keg Deposit	Cases/Kegs	1
129	rye 1/2 bbl	Beer	1
47	HHB Lite Lager	Happy Hour	1
39	Gold Buckle	Cases/Kegs	1
0	\$1000 BFL	Merch	2
59	HHF Meatball Sub	Happy Hour	2

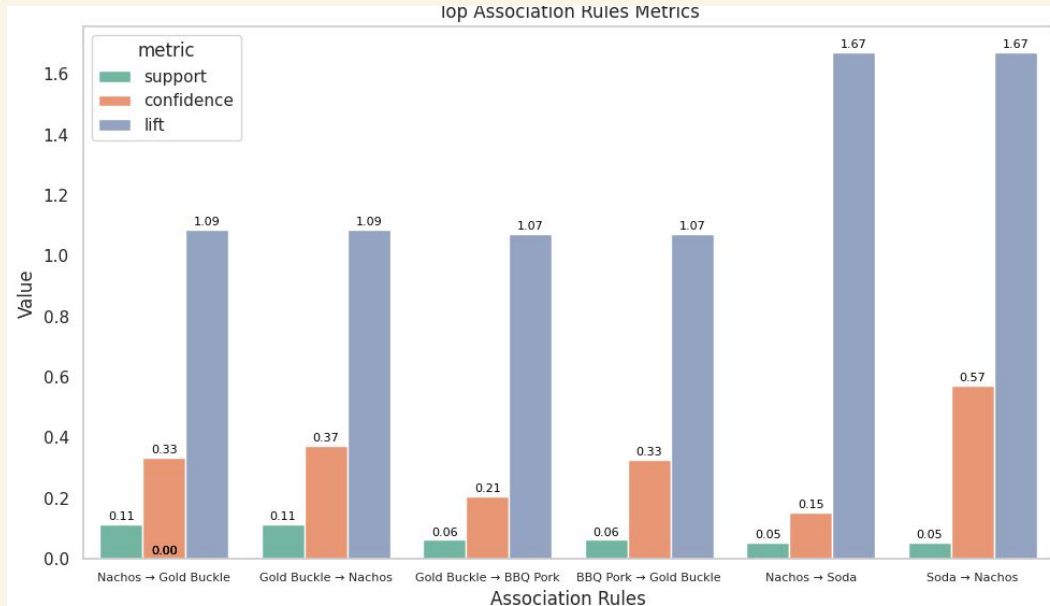
Challenges:

- May only have been seasonal, one time discount, or custom.

Resolve:

- Filter out or focus on year round products

Market basket analysis - Common item combinations



Support: total transaction

- Highest purchased combination: Nachos & Gold Buckles
- Lowest purchased combination: Soda & Nachos

Confidence: purchase likelihood

- Nachos & Gold Buckles
- Soda & Nachos

Lift: how much more likely

- High: Sodas & Nachos
- Moderate: all others (above 1.0 -> positive association)

Market Basket Insights - Recommendations

01

Strong association
Sodas & Nachos

Bundling or Cross-selling deal

02

Highest support
Nachos & Gold Buckles

Promote. Strategic in-store placement

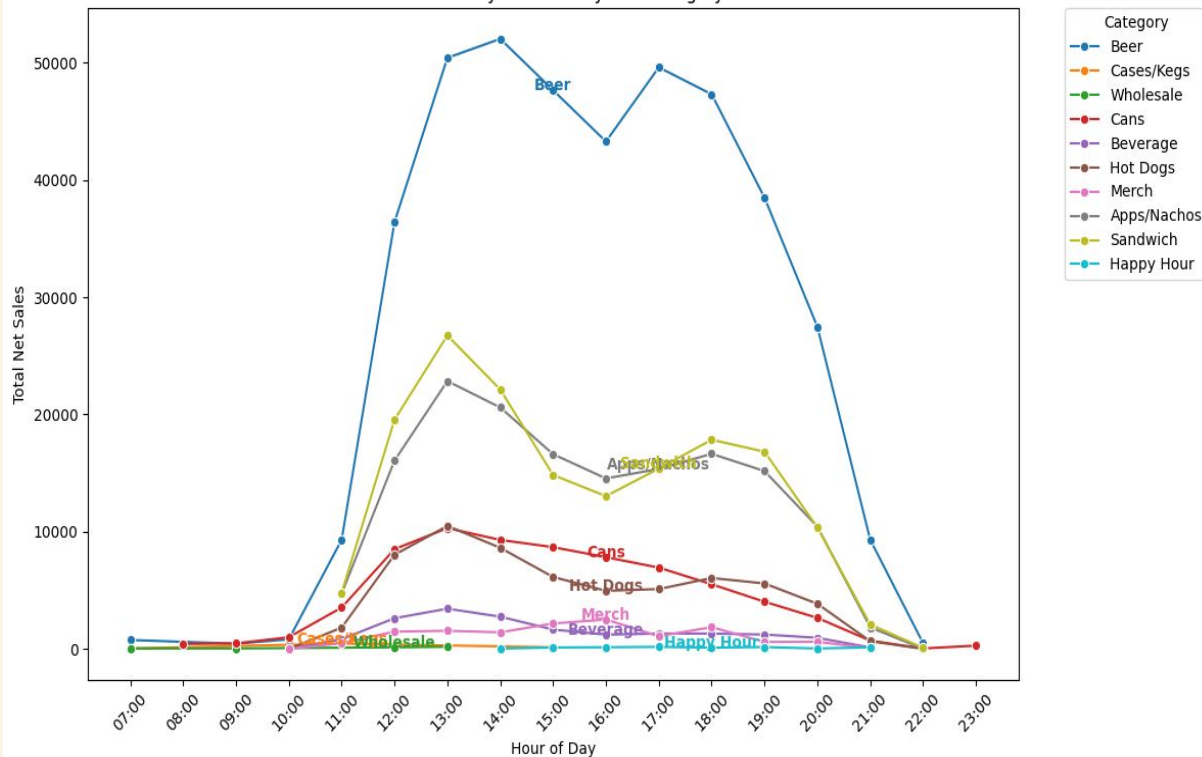
03

Middle association
Gold Buckle & BBQ Pork

Seasonal promotion & Limited time deal

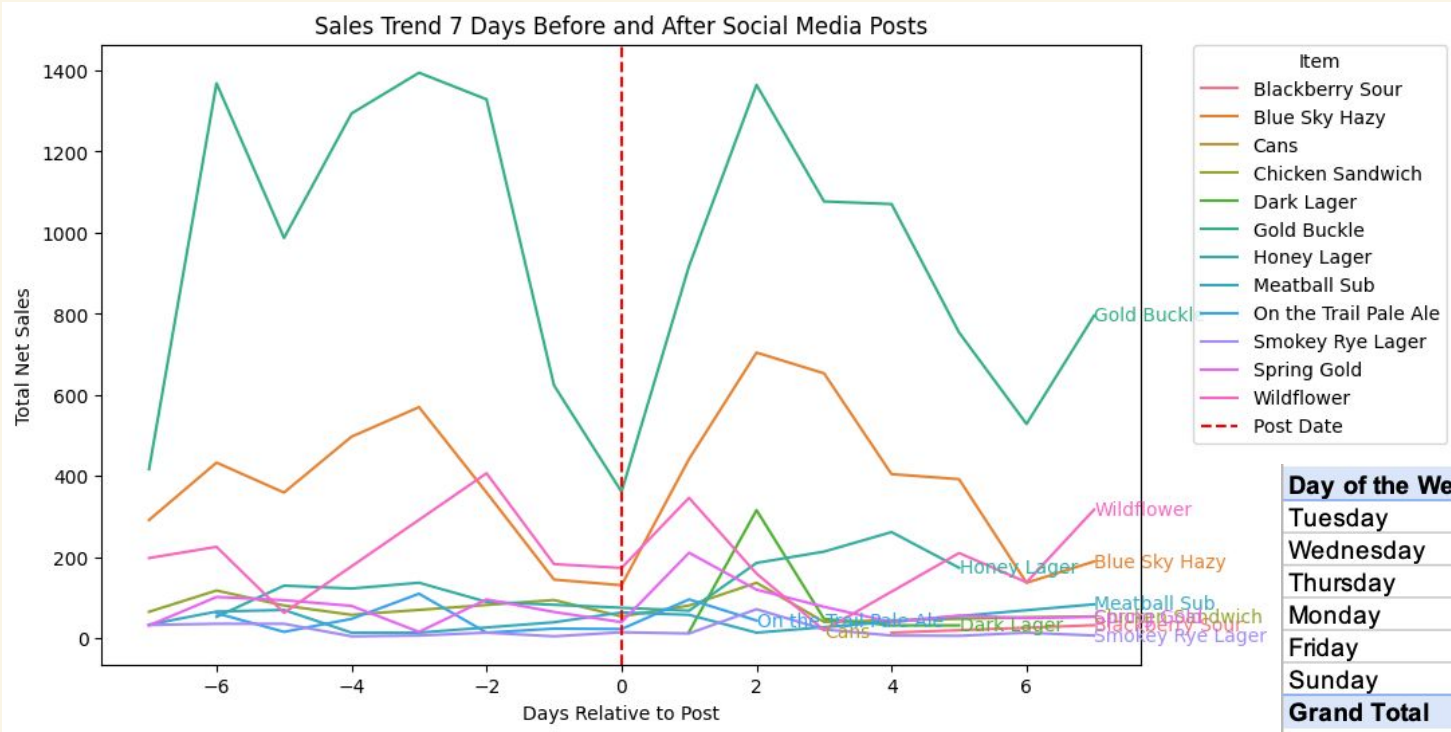
Total Sales by Hour of Day & Category

Total Sales by Hour of Day and Category



<u>Category</u>	<u>Net Sales</u>
Apps/Nachos	\$154,876.26
Beer	\$414,277.08
Beverage	\$17,496.92
Cans	\$70,298.44
Cases/Kegs	\$657.00
Happy Hour	\$969.00
Hot Dogs	\$61,392.62
Merch	\$13,898.49
Sandwich	\$163,708.62
Wholesale	\$432.00

Total Sales relative to Social Media Post Date



Recommendations

- Post graph dips near post date because they post on Tuesdays mostly
- Push to weekly to react better to posts
- Check just September because they started to open on Mondays and Tuesdays that month
- Make a graph with a moving average to better show trends
 - (Gold Buckle overshadows the other items that were posted)

Thank you
