Dunkin' Donuts: Leveraging Business Intelligence for Innovation

Team 2

CONTENTS

01 INTRODUCTION

Mission & Vision

Mission: "To be the world's leading baked goods and coffee chain, serving delicious, high-quality products that bring joy and fuel their customers' day."

Vision: "Dunkin' aims to be the go-to destination for high-quality coffee, delicious doughnuts, and bakery products for customers to enjoy with their loved ones."

Introduction

- Founded in 1950, leading global coffee and baked goods chain
- Over 12,900 restaurants in 42 countries
- Primary products: donuts, bagels, coffee, baked goods
- Franchise model with 200,000 employees
- Limited use of advanced BI and analytics currently

Goals & BI Needs

- Expand into new markets
- Offer innovative, health-conscious products
- Capitalize on evolving consumer trends
- Integrate data sources: POS, loyalty, social media, market research
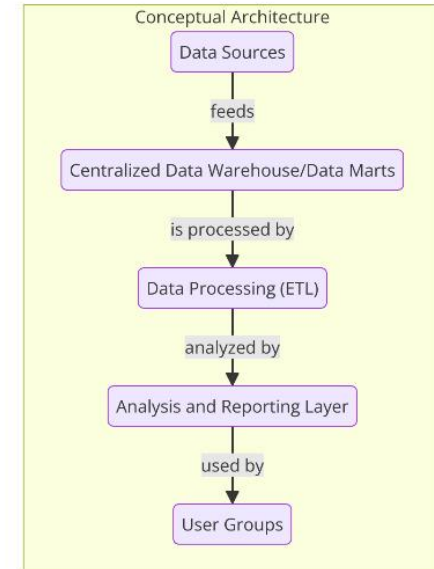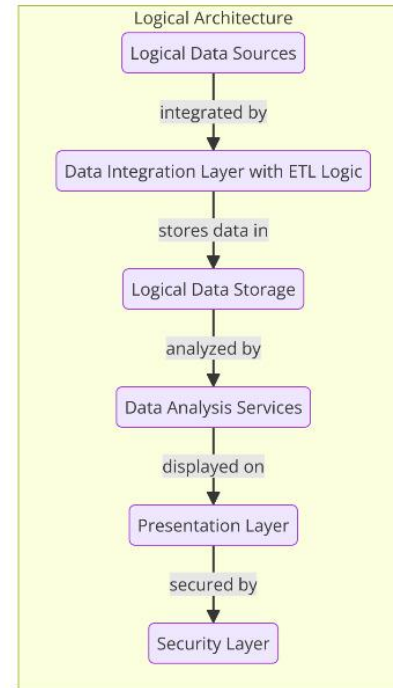- Enable advanced reporting, predictive analytics

02

Proposed BI Solution

1. BI Framework

2. Use Case One

3. Use Case Two

BI Framework

Process Architecture

Data Collection Processes

↓ *cleaned by*

Data Cleaning and Transformation Workflows

↓ *loaded by*

Data Loading Sequences

↓ *analyzed during*

Scheduled Analysis Jobs

↓ *triggers*

Event-Driven Alerting Mechanisms

↓ *interacts with*

User Interaction Processes

Physical Architecture

Physical Data Source Systems

↓ *processed by*

ETL Tools and Data Integration Servers

↓ *stored on*

Data Warehouse Servers

↓ *processed on*

Analytical Processing Servers

↓ *accessed via*

Client Devices

↓ *protected by*

Network Infrastructure

Logical Architecture

Logical Data Sources

↓ *integrated by*

Data Integration Layer with ETL Logic

↓ *stores data in*

Logical Data Storage

↓ *analyzed by*

Data Analysis Services

↓ *displayed on*

Presentation Layer

↓ *secured by*

Security Layer

Conceptual Architecture

Data Sources

↓ *feeds*

Centralized Data Warehouse/Data Marts

↓ *is processed by*

Data Processing (ETL)

↓ *analyzed by*

Analysis and Reporting Layer

↓ *used by*

User Groups

Figure 1: BI Framework

Use Case One - Customized Donuts

- **Challenge**: Customer demand for variety & personalization
- **Solution**: Dunkin' DIY Stations for self-serve customized donuts
- **BI Integration**:
  - Analyze POS data for popular toppings/bases
  - Customer segmentation for localized options
  - Dynamic pricing, upsell recommendations
  - Real-time ingredient monitoring

Use Case Two - Healthier Options

- **Challenge**: Sugary image deters health-conscious consumers
- **Solution**: Expanded healthy breakfast/snack menu
- **BI Integration**:
  - Market research on healthy preferences
  - Customer feedback analysis
  - Sales tracking of healthy items
  - Targeted promotions to customer segments

03

IMPLEMENTATION

1. Dashboard 1 - Sales Performance

2. Dashboard 2 – Customer Segmentation

3. Social Media Sentiment Analysis

4. Analytics - KMeans Segmentation Analysis

Dashboard 1 - Sales Performance

Goal: Gain insights into sales performance across different product categories, locations, and periods.

- Interactive maps for sales by location
- Sales Comparison
- Sales Targets
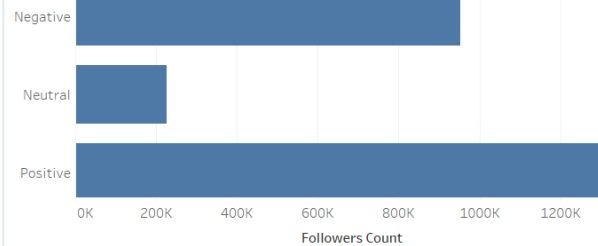- Marketing campaign impact analysis
- Sales targets tracking
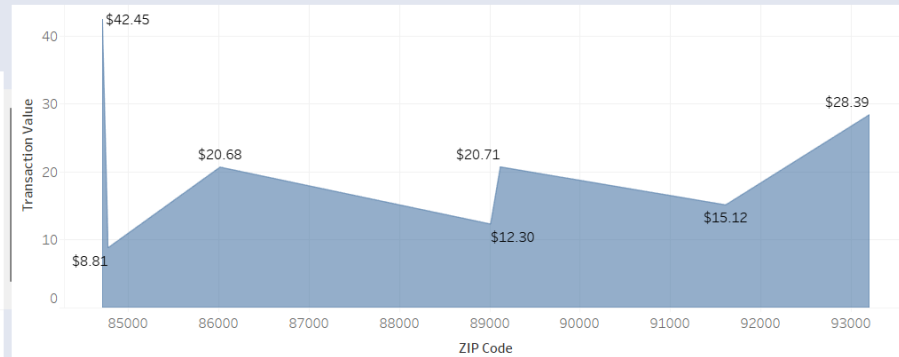
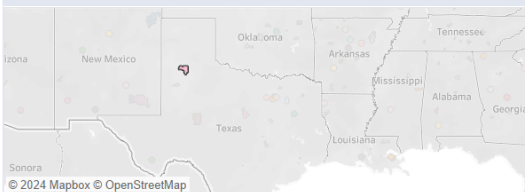# Dashboard 1 - Sales Performance
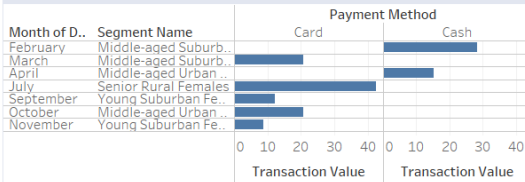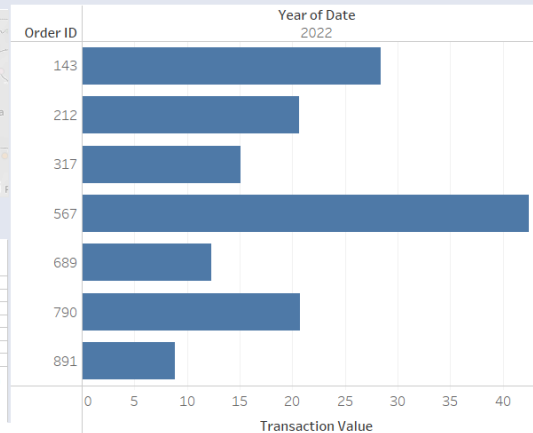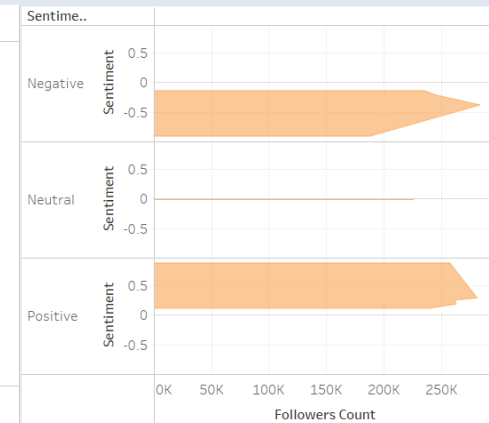
Dashboard 2 – Customer Segmentation

Goal: Understand customer behavior and preferences to inform targeted marketing and product development strategies.

- Customer segments by demographics, purchase behavior
- RFM (recency, frequency, monetary) analysis
- Product affinity analysis
- Campaign performance by segment
- Customer feedback integration

Dashboard 2 – Customer Segmentation
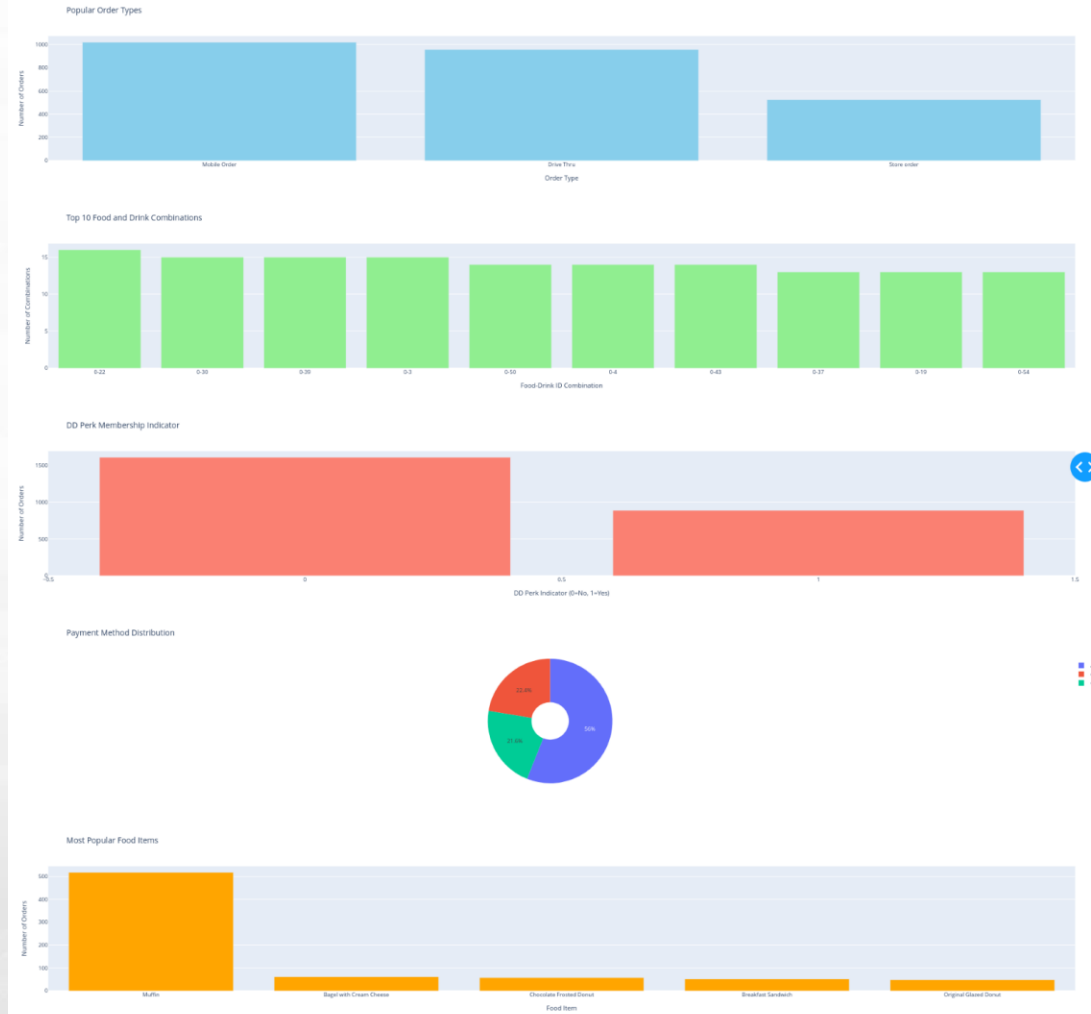
Dashboard 2 – Customer Segmentation

Analytics - KMeans Segmentation Analysis

Goal: Perform customer segmentation analysis for Dunkin' Donuts using their customer interaction data to better understand demographics and behavior, enabling refined marketing strategies.

- Data Encoding
- Feature Selection and Scaling
- Clustering Application

Social Media Sentiment Analysis

- Collect brand mentions across platforms
- Sentiment analysis (positive, negative, neutral)
- Topic modeling for recurring themes
- Outputs: Sentiment reports, word clouds, customer personas

Reviews Sentiment Analysis

Dunkin' Retweeted
Haley Garbaciak @haleyp711 · Apr 29
The pomegranate coconut milk refresher from Dunkin is 10/10 my new favorite 😍

💬 1   🔁 8   ♡ 69   ⬆

Dunkin' Retweeted
®NaomiR @Nao23Mi · Apr 29
Strawberry Coconut Refresher from Dunkin is soo good 😌.

💬   🔁 9   ♡ 59   ⬆

Score: 0.59
Neutral

Lisa C.
Worcester, MA
📷 2   🏅 50   🖼 3

⭐☆☆☆☆ Jun 13, 2017

I live legit 3 mins from this dunks but unfortunately it sucks... first off the line is always wrapped around the whole store and I'm talking waiting 15 mins. When I place my order I'm always wicked rushed to the point where I don't even bother with food anymore. But what ruins it for me is the way the coffee taste. Absolutely unacceptable it's fuckin nasty... I hate to sound foul but it doesn't taste like anything that usually comes out of dunks. I've had some mediocre coffees but this is just wrong. I will purposely travel farther for a better start to my morning

Dunkin' Donuts
18 June

#Humpday isn't going anywhere, but the coffee and sunshine are helping our mood go up!

Negative
Score: 0.383

Positive
Score: 0.99

Like · Comment · Share

👍 26 people like this.

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04 ETHICAL CHALLENGES

1. Overview of Ethical Issues for Implementations.

2. Kotter's 8 step model

Overview of Ethical Issues for Implementations

- Food waste from customization options
- Employee training requirements
- Transparency in nutritional labeling
- Avoiding misleading health claims
- Worker safety/compensation for delivery
- Maintaining quality in value pricing

CONCLUSION

- BI integration positions Dunkin' Donuts for continued growth
- Facilitates informed decision-making
- Fosters deeper customer connections
- Initial tests indicate cost reduction and sales improvement potential

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THANK YOU