Business Analytics Practicum (MGT 4803)

Zhaohu (Jonathan) Fan

Information Technology Management

Scheller College of Business

Georgia Institute of Technology

April 4, 2024

Second Presentation

- Second Presentation:
  - **Original Plan:** April 4, 5:00 PM – 6:15 PM
  - **Updated Plan :** Rescheduled to April 11, 5:00 PM – 6:15 PM

Data dictionary w/new metrics

Metric	Definition
STR_NBR	Unique Identifier for Store Number
YEAR	Fiscal Year that the data is being aggregated
WEEK	Fiscal Week that the data is being aggregated
CLEARANCE_NO_HOME_PCT	Clearance NH $ / Total Clearance $
TOTAL_TASK	# of tasks sent out to a store
COMPLETE_TASK	# of tasks sent completed by a store
RESENT_TASK_CNT	# of tasks that had to be resent, due to original incompletion of task.
AGED_WC_PCT	# of Open Aged Will Calls/# of total Open Will Calls
SKU	Stock Keeping Unit, unique identifier for a product.
CULL_MD_PCT	Cull Markdown $ / Total Sales $ (for products elligible for Cull MD)
DMG_MD_PCT	Damaged Markdown $ / Total Sales $ (for products elligible for Dmg MD)
BOSS_RTV_PCT	Cancelled BOSS Orders that were RTVed / Total Cancelled BOSS Orders
BOSS Order	Buy Online, Ship to Store
RTV	Return to Vendor
RTV_DEL_PCT	Lost RTV Deleted Tag $ / Total RTV Tag $

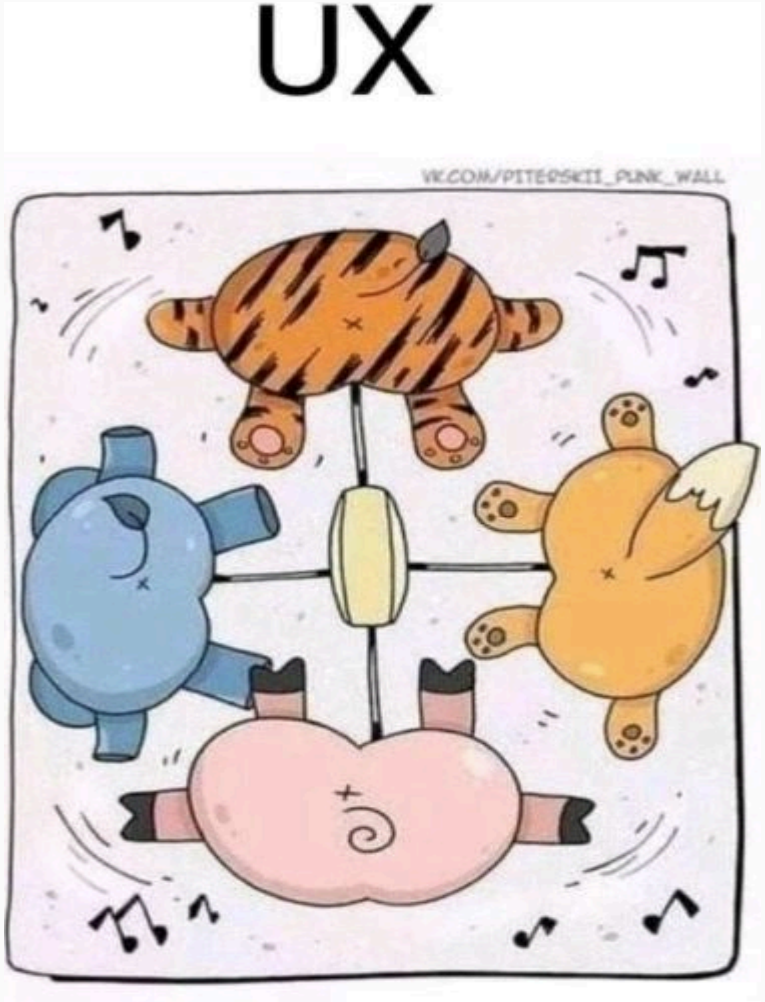
Final Presentation

- Final Presentation:
  - **Plan A:** May 2, 5:00 PM – 6:15 PM
  - **Plan B:** April 25, 5:00 PM – 6:15 PM

User Interface (UI) vs User Experience (UX)

User Interface (UI)

User Interface (UX)



High-level understanding of the architecture through dashboard

- Please click on the link provided below
  - Executive Overview (Demo)

How do we use data to navigate business performance over different periods ?

How do we use data to navigate business performance over different periods ? **Trend Analysis**

What is trend analysis?

- **Day-over-day Change**
- **Week-over-week Change**
- **Month-over-month Change**
- **Year-over-year Change**

3 Steps to calculate Day-over-Day

- **Step 1: Identify the Values**
  - Previous Day's Value (Monday): **150 visitors**
  - Current Day's Value (Tuesday): **175 visitors**

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- **Step 1: Identify the Values**
  - Previous Day's Value (Monday): **150 visitors**
  - Current Day's Value (Tuesday): **175 visitors**
- **Step 2: Calculate the Change in Value**
  - Subtract the Previous Day's Value from the Current Day's Value.
  - Change in Value = Current Day's Value - Previous Day's Value
  - Change in Value = **175 visitors - 150 visitors =25 visitors**

3 Steps to Calculate Day-over-Day

- **Step 2: Calculate the Change in Value**
  - Subtract the Previous Day's Value from the Current Day's Value.
  - Change in Value = Current Day's Value - Previous Day's Value
  - Change in Value = **175 visitors - 150 visitors = 25 visitors**
- **Step 3: Calculate the Percentage Change**
  - To find out the percentage increase or decrease, you divide the Change in Value by the Previous Day's Value and then multiply by 100 to convert it to a percentage.
  - **Percentage Change = (Change in Value / Previous Day's Value) * 100**
  - **Percentage Change = (25 visitors / 150 visitors) * 100 = 16.67** %

What is trend analysis (cont'd)

- **Day-over-day Change:**
  - Identifies immediate trends and short-term performance impacts.
- **Week-over-week Change:**
  - Reveals weekly trends and is especially useful for spotting anomalies or effects of short-term marketing campaigns.
- **Month-over-month Change:**
  - Highlights longer-term trends and the effectiveness of monthly strategies or operational changes.
- **Year-over-year Change:**
  - Offers insights into long-term trends, seasonality, and annual performance comparison, crucial for strategic planning and forecasting.

Why is trend analysis important?

- Helps identify both short-term and long-term trends.
  - **Seasonality and Patterns:** Useful for spotting seasonal trends and cyclic patterns.
  - **Anomaly Detection:** Indicates anomalies through sudden changes, prompting further investigation.
  - **Performance Measurement:** Measures the impact of specific actions or events on performance.
  - **Forecasting**: Enhances forecasting models with insights on expected changes under similar future conditions.
  - **Strategic Planning:** Reveals long-term trends and shifts for better strategic planning.
  - **Customization and Precision:** Offers relevance to different businesses based on their operational cycle and decision-making needs.

Project goals (TechSavvy Insights (Team #1))

- **Project focused on providing insights on current value creation for tasks assigned to stores**

Project goals (Wet Paint Watchers (Team #3))

- **Project focused on developing a sustainable dashboard to track value and impact continuously**

Open for discussion

Events

- Can we **identify any patterns or trends in the time series data** that occurred over the last week?
    - **What were the most common types of events, and how frequently did they occur?**
    - **Were there any specific days or times when the events spiked?**
    - Have any of the events been repeated from previous days, indicating a persistent issue?

Events

- What steps have been taken to address these errors so far?
    - How do these error rates compare to the previous week's?
    - Are there any correlations between the errors and recent changes or updates in our machines or processes?
    - What preventive measures can we implement to reduce the occurrence of these events in the future?