Team Brown

Assignment-3
Final Presentation

Team Members :

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Type of Data

- Our Datasets include feature releases and app reviews for the following during the period of 2022 – 2024 :

1. Zoom

- The type of Data here we are going to work is **traceability between features and app reviews** to understand how updates impacts user feedback.

Temporal Aspects in Data

- Temporal aspect in data refers to the time-related characteristics of the data.
- Here, Feature releases and app reviews which consists of timestamps allowing us to track feature adoption trends over the time, surge in user feedback after updates and long-term sentimental analysis.

Who Benefits from This Visualization? (Usefulness)

- **Primary Stakeholder**: Product Managers at Zoom.
- Product managers are responsible for **understanding user feedback**, **monitoring satisfaction**, and making **decisions about new or existing features.**
- They need to know **how users emotionally respond to new feature launches**—but going through thousands of reviews manually is slow and difficult.
- Our visualization gives them a **clear, time-aligned view of user sentiment**, using emojis as emotional signals.
- With this dashboard, they can:
  - **Track emotional reactions** (positive, neutral, negative) over time.
  - **Link spikes or drops in sentiment** to the release of specific features.
  - Make **faster, evidence-based product decisions.**

Why This Visualization is Important for Product Managers?

- **Quick Issue Detection**:
  - Identify **when and why** user satisfaction suddenly drops (e.g., bugs, poor UX).

- **Feature Validation**:
  - See which feature rollouts led to **positive emotional feedback**, so they can replicate success.

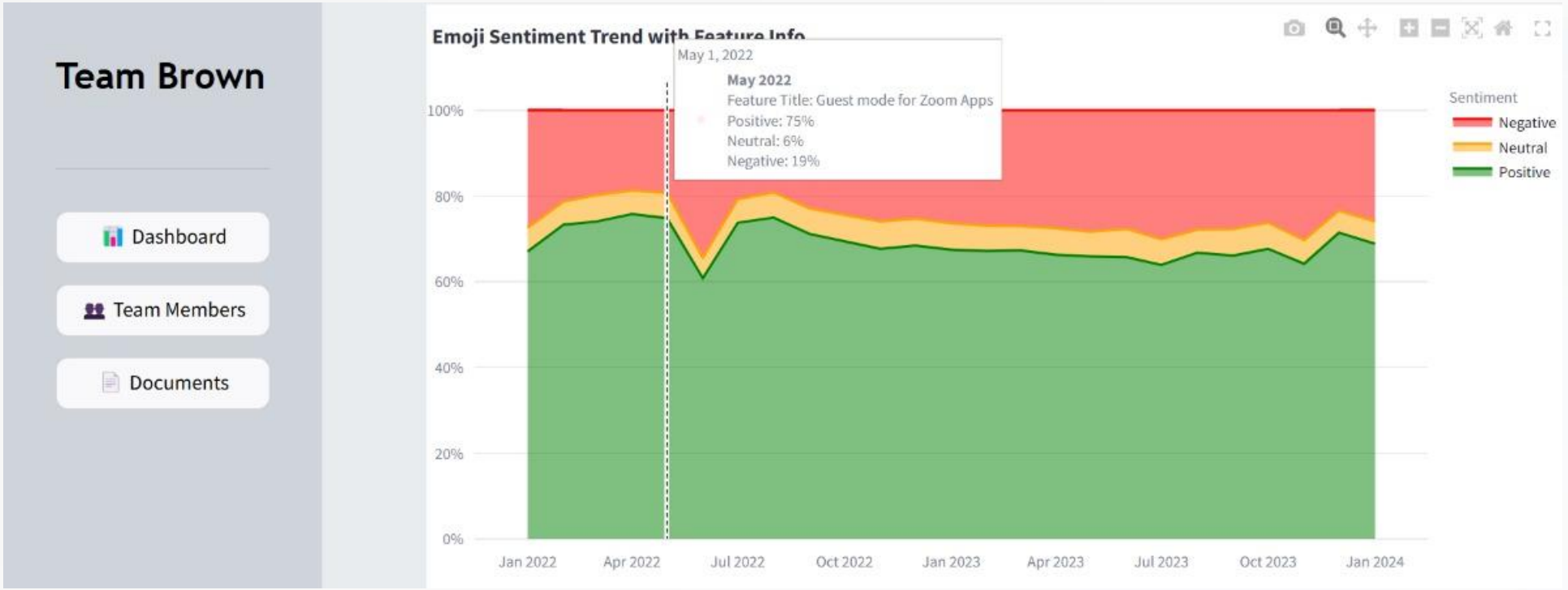
- **Prioritization Made Easier**:
  - Use emotional patterns to **decide what to fix, improve, or promote** in future releases.

- **No Guesswork**:
  - Managers don’t need to interpret complex charts — this area chart is **visually intuitive** and shows **real-time user mood** at a glance.

- **Saves Time & Adds Insight**:
  - Instead of reading endless reviews, teams get a **compressed, emotional timeline** that tells a complete story.

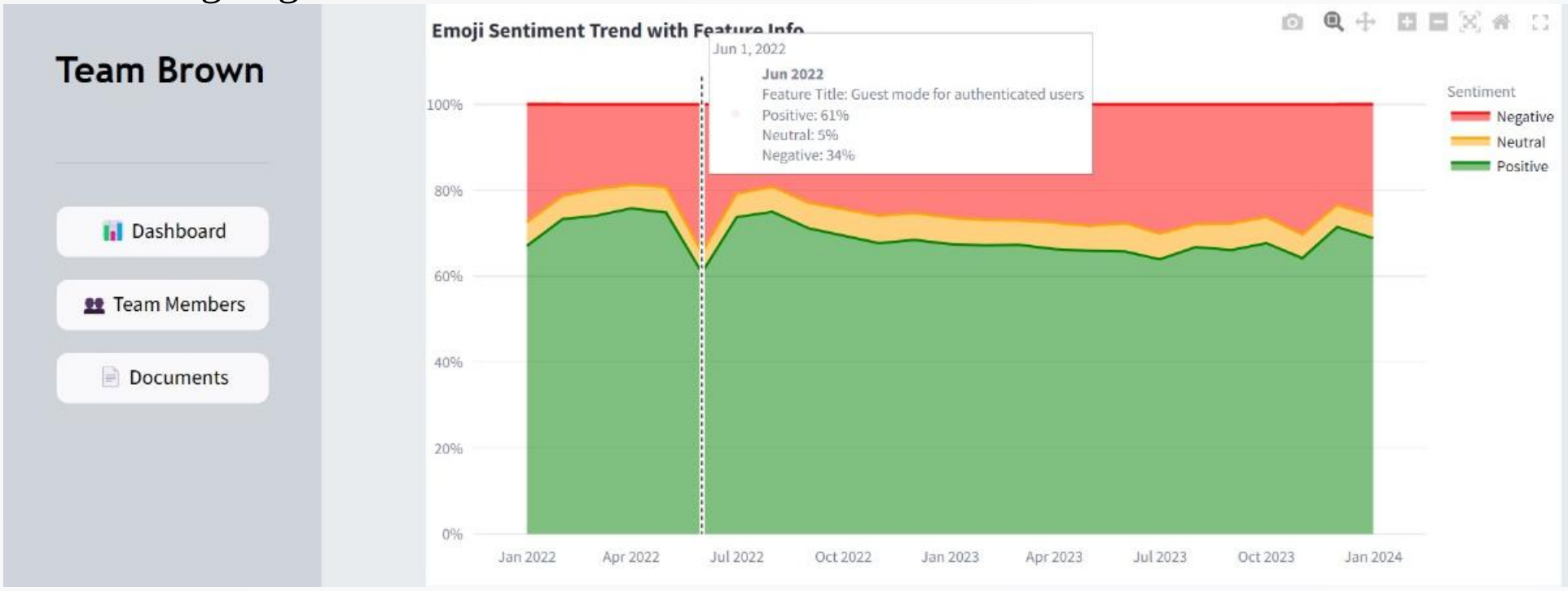
Real-World Use Case – Product Manager at Zoom

- **Scenario 1:**
- **Feature:** "**Guest mode for Zoom apps**" released in May 2022.
- **Timeline view shows:** Positive Reaction -Positive sentiment at **75%**, Neutral at 6%, Negative dropped to 19%.
- **Action:** Consider expanding guest access capabilities and marketing it as a user-loved feature.



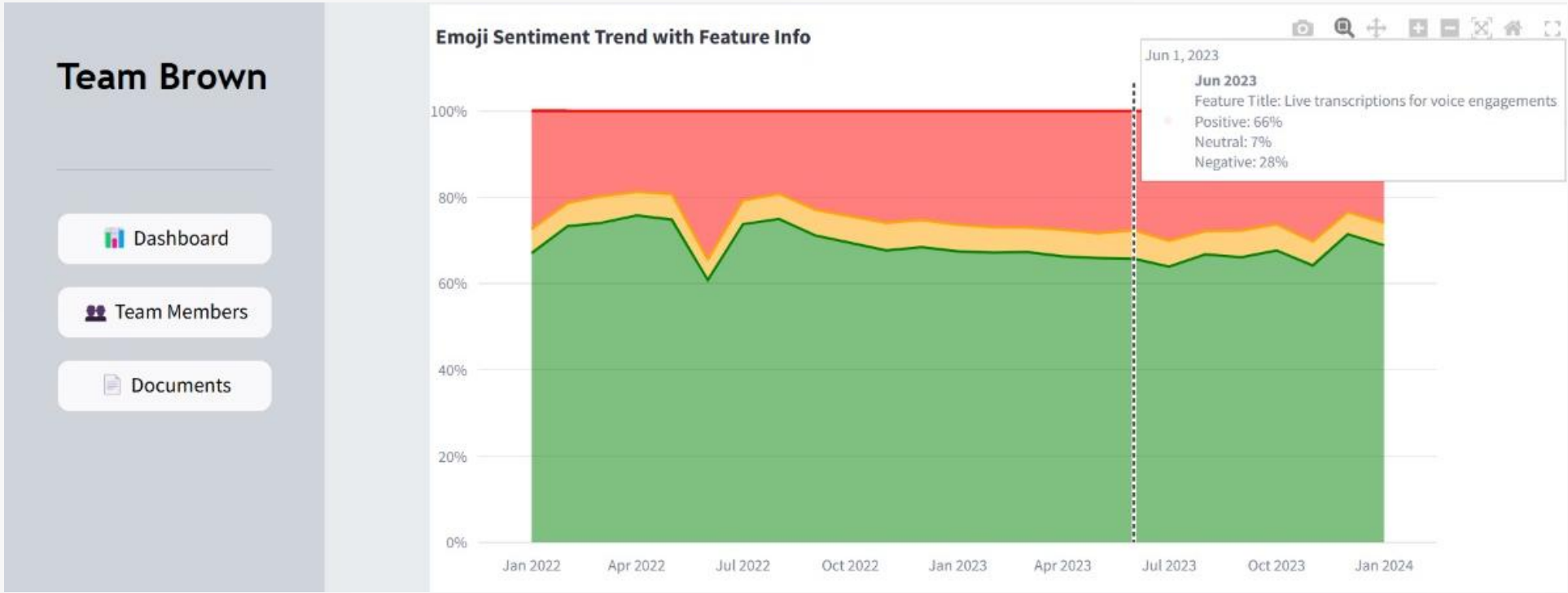
Real-World Use Case – Product Manager at Zoom

- **Scenario 2:**
- **Feature:** "**Guest Mode for Authenticated Users**" released in June 2022.
- **Timeline view shows:**Negative reaction — Positive sentiment 61%, but Negative jumped to **34%**, Neutral at 5%.
- **Action:** Investigate specific complaints or confusion among authenticated users; UX documentation or onboarding might need refinement.

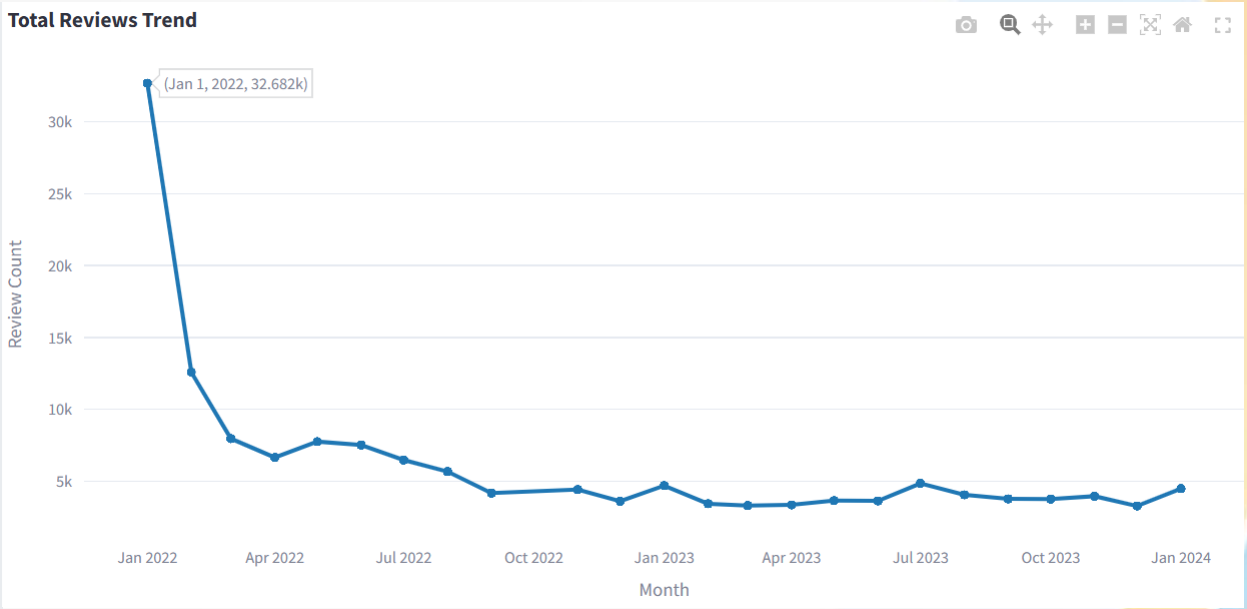


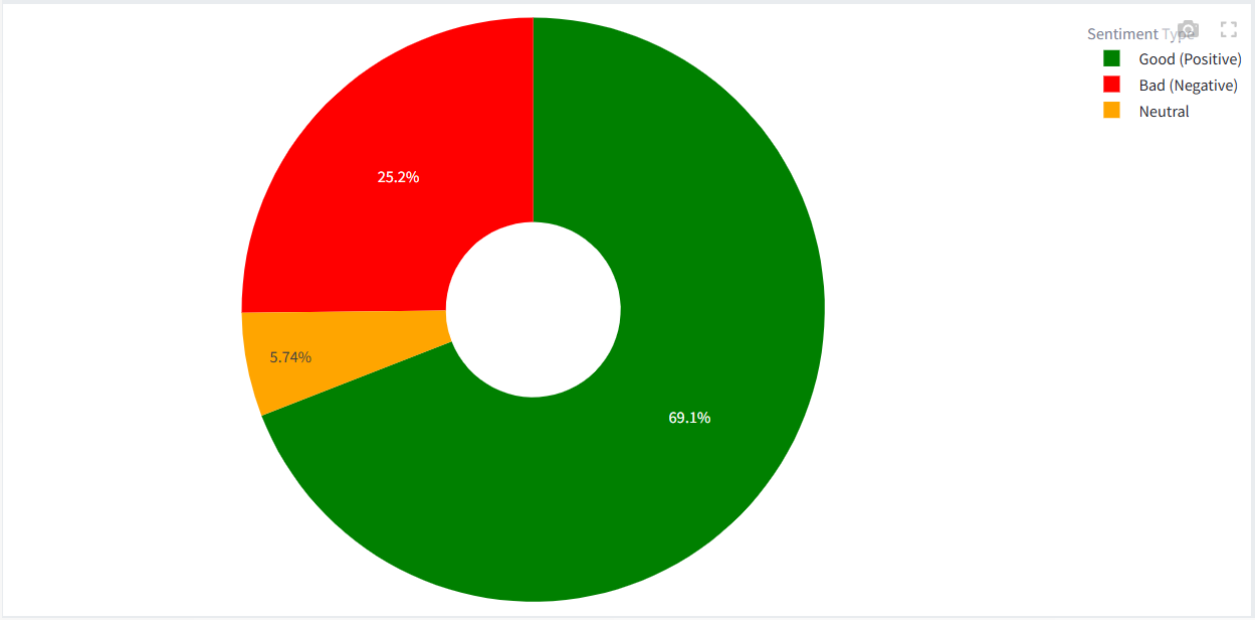
Real-World Use Case – Product Manager at Zoom

- **Scenario 3:**
- **Feature:** “**Live Transcriptions for Voice Engagements**” released in June 2023.
- **Timeline view shows:**Moderate positive reaction — Positive at 66%, Neutral **7%**, Negative 28%.
- **Action:** Consider follow-up usability surveys or feature fine-tuning; explore if accessibility options met expectations.



Total Reviews Over Time





Overall Review Sentiment Distribution

Why is this Visualization Novel ?

1. Turns Reviews into Action

- Instead of reading thousands of reviews, teams can quickly spot issues or successes and take action right away.
- It saves time and gives clear direction for what to fix or improve next.

2. Shows Feelings + Features Together

- We don’t just show what features were released — we show how users felt about them, all in one clear graph.
- This helps teams see the emotional impact of each update.

3. Easy to Understand at a Glance

- Uses emojis to show how people felt — happy, sad, or angry — making it fast and simple to spot problems or wins.

Technologies & Tools We Used.

Core Technologies:

- **Python –** Backend logic, data processing.
- **Streamlit –** Interactive dashboard interface.
- **Plotly –** Used for stacked area chart with hover interactivity.
- **Pandas –** Data manipulation and cleaning.

Data Insights:

- Used monthly review data for Zoom.
- Extracted emojis + sentiment using RoBERTa model + custom logic .

Why These?

- Tools were easy to integrate, supported fast prototyping, and enabled a rich, visual experience.

Challenges & How We Solved Them

1. No direct link between features & reviews.

- Used timestamps to connect features and sentiment over time.

2. Emoji sentiment isn’t always accurate

- Created custom polarity logic + combined with RoBERTa output.

3. Large, noisy review data

- Cleaned using Pandas, removed irrelevant or duplicate reviews.

4. **Styling and interactivity in UI**

- Customized Streamlit UI with CSS for a clean, user-friendly layout.

Highlights of Our Prototype

1. Stacked Area Graph with Hover
- Shows positive, neutral, and negative trends per month.
- Displays feature titles on hover — clear and contextual.

2. Modular Code
- Minimal hardcoding — dropdowns, feature loading, and charting are reusable.
- App toggle options (Zoom, Webex, Firefox) already integrated.

3. Dashboard Navigation
- Sidebar with pages: Dashboard, Team, Documents.
- Embedded PDF preview via base64 — extra touch for polish.

⚠ Limitations & Future Improvements

Current Limitations:

- Sentiment alignment with features is approximate, not exact.
- Only Zoom data fully implemented for now.

Future Plans:

- Add filtering options (by sentiment, feature type, time)
- Expand for real-time updates and multi-app comparisons
- Improve emoji classification using advanced NLP (e.g., sarcasm detection)

Link to our working prototype :

https://team-brown.streamlit.app/

Thank You!