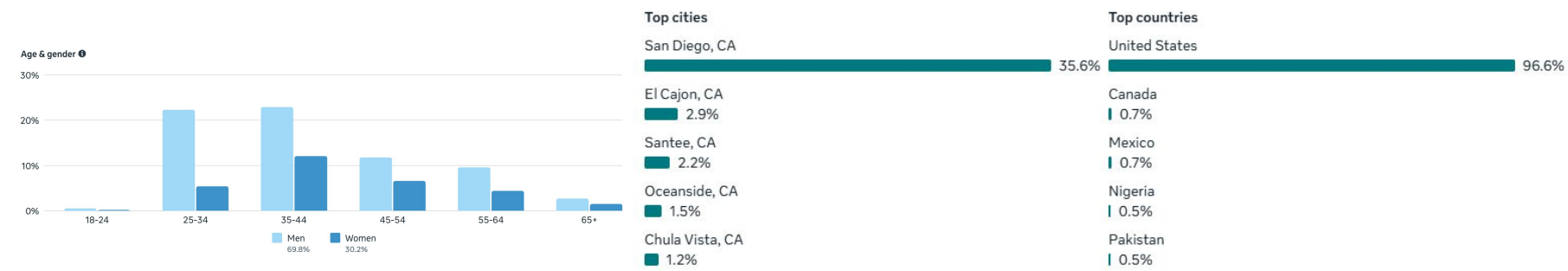# Non-profit Organization 'A' Social Media Audience Analysis
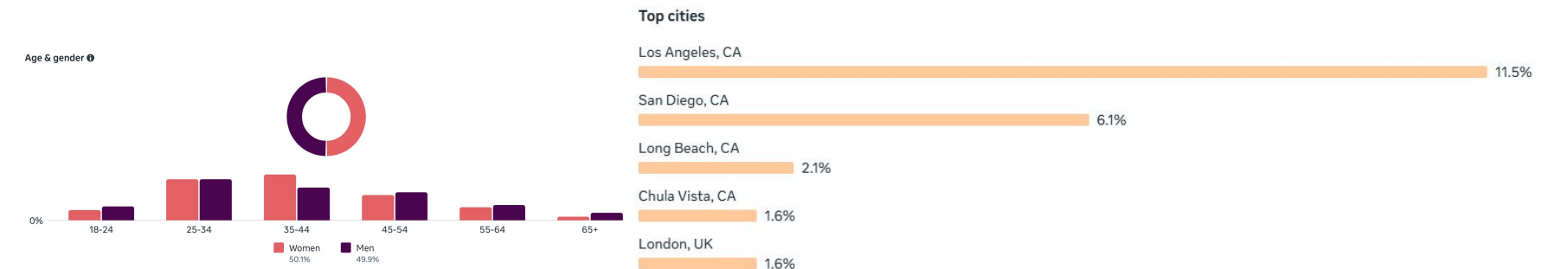
RESEARCH & ANALYSIS TASKS: DEMOGRAPHICS OF AUDIENCE

Facebook

Age & gender ⓘ

Men 69.8%	Women 30.2%

Top cities

San Diego, CA	35.6%
El Cajon, CA	2.9%
Santee, CA	2.2%
Oceanside, CA	1.5%
Chula Vista, CA	1.2%

Top countries

United States	96.6%
Canada	0.7%
Mexico	0.7%
Nigeria	0.5%
Pakistan	0.5%

Instagram

Age & gender ⓘ

Women 50.1%	Men 49.9%

Top cities

Los Angeles, CA	11.5%
San Diego, CA	6.1%
Long Beach, CA	2.1%
Chula Vista, CA	1.6%
London, UK	1.6%

RESEARCH & ANALYSIS TASKS: DEMOGRAPHICS OF AUDIENCE

Current Meta Business Limitations	POTENTIAL SOLUTION

Meta Business Suite provides only basic demographic insights:

- Total follower count
- Age distribution
- Gender breakdown
- Top cities and top countries

- Strategic Platform Diversification: To capture comprehensive audience intelligence, we recommend expanding our digital presence:
  - **Professional Network Expansion:**
    i. **Linkedin** for the audience who would be align and interested in Ecoservant's professional mission
  - **Engagement-Focused Platform:**
    i. X or Threads for more engagement and discussion of Ecoservant's activities
- Survey Implementation: We can gather critical audience insights including:
  - **Professional Demographics**
    i. Occupation categories (corporate professionals, students, environmental sector workers)
    ii. Industry affiliations
    iii. Professional interests and expertise level
  - **Acquisition Analytics**
    i. Traffic source attribution (Social platforms, search engines, email marketing, event attendance

DATA DESCRIPTION

Dataset Overview

- **Facebook dataset: 32** dataset analyzed over 90-day period **(May 13, 2025 - August 10, 2025)**
- **Instagram dataset: 36** dataset analyzed over 90-day period **(May 16, 2025 - August 13, 2025)**
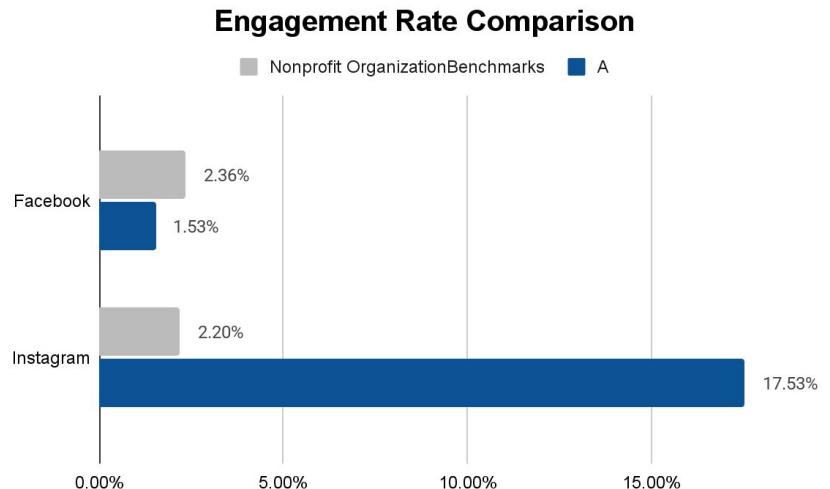
Data Variables

- **Carousel**: Multi-media posts (2-10 items) that users swipe through horizontally to view different content.
- **Engagement Rate**: Measures how actively your audience interacts with your content, calculated as the percentage of people who liked, commented, or shared your post out of the total number who saw it (reach).
  - Facebook: (Reaction + Comments + Shares) / Reach
  - Instagram: (Likes + Comments + Shares + Saves) / Reach
- **Links**: Posts with external URLs to websites or content outside Facebook, showing link previews.
- **Photos**: Static image posts including single photos, albums, or carousels with multiple images.
- **Reach:** The total number of unique users who saw the content at least once during the specified time period.
- **Reels**: Short vertical videos (15-90 seconds) with music, effects, and creative editing.
- **Text**: Text-only posts without media attachments like status updates or announcements.
- **Videos**: Standard video content including longer-form, landscape/square format, and live videos.
- **Views:** The total number of times content was displayed on users' screens, including multiple views by the same user.

RESEARCH & ANALYSIS TASKS:
NONPROFIT ORGANIZATION ENGAGEMENT RATE BENCHMARKS

Platform	Average Engagement Rate	Peak Performance	Source
Facebook	**2.36%** (2 posts/week)	**3.0%** (Albums)	Social media benchmarks: 2025 data + tips Hootsuite 2025
Instagram	**2.2%**	**5.5%** (Carousels)	Social media benchmarks: 2025 data + tips Social Insider/Hootsuite
TikTok	1.3%	-	Hootsuite 2025
LinkedIn	0.1-0.8%	2.5% (by reach)	Social Insider
X/Twitter	1.67% (3 posts/week)	2.4% (Replies)	Social media benchmarks: 2025 data + tips Hootsuite 2025

SOCIAL MEDIA ENGAGEMENT PERFORMANCE ANALYSIS

Engagement Rate Comparison

Nonprofit OrganizationBenchmarks ■ A

Facebook
- 2.36%
- 1.53%

Instagram
- 2.20%
- 17.53%

0.00%　　5.00%　　10.00%　　15.00%

- **Facebook Performance:**
  - Mean engagement rate: **1.53%**
  - Performance assessment: Aligns closely with established nonprofit organization industry benchmarks, indicating standard performance levels with opportunities for optimization
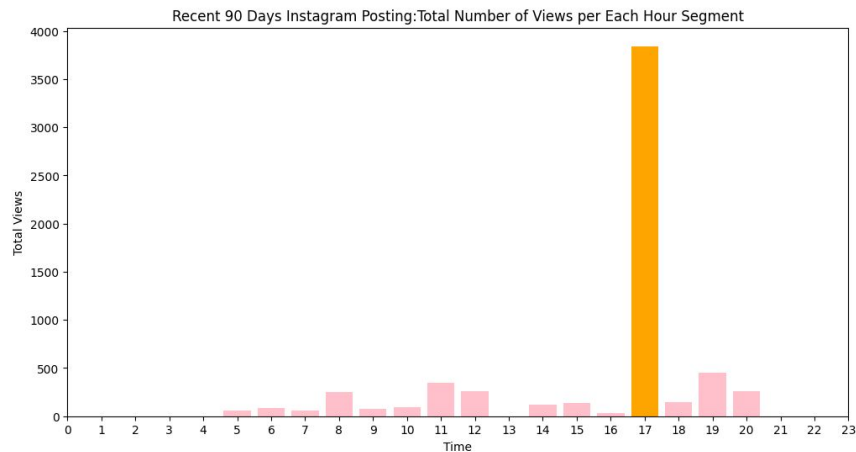
- **Instagram Performance:**
  - Mean engagement rate: **17.53%**
  - Performing assessment: Demonstrates exceptional engagement levels, significantly exceeding industry standards. It should be noted that this analysis is based on a 90-day observation period, which may require extended data collection to validate long-term performance trends and ensure statistical accuracy of these metrics.

WHAT MAKES THESE NUMBER SO HIGH?

What types of post gets most views?

Recent 90 Days Instagram Posting: Average Number of Views per Post Type
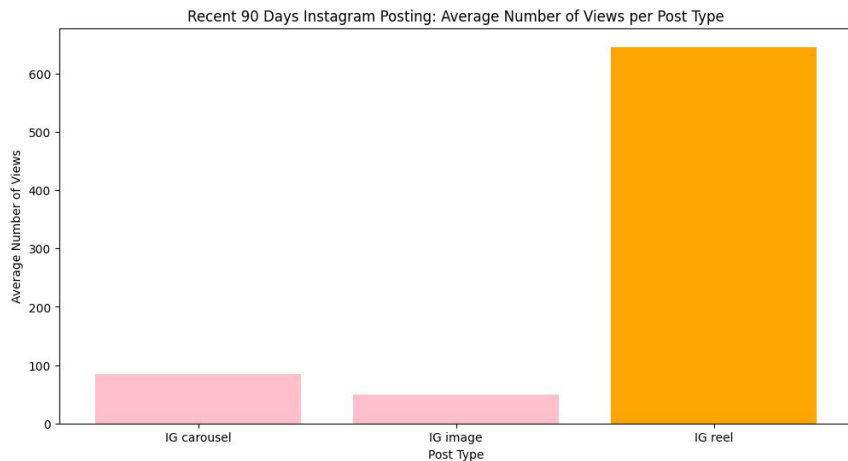
When is the best time to upload the media

Recent 90 Days Instagram Posting:Total Number of Views per Each Hour Segment

- Certain content categories and time periods demonstrated disproportionately high views and reach metrics compared to baseline performance, indicating potential outliers that warrant further investigation
- Applied the 2-sigma rule to identify outliers representing the top 2.5% of values in the distribution to filter out those campaign performing far above our normal range

SEPARATING PAID VS. ORGANIC PERFORMANCE

View

```
]: mean_view= dig['Views'].mean()
   std_view = dig['Views'].std()
   #filtered_df =
   dig['Views'] >= mean_view + 2*std_view # mean +- 2σ (sigma) range: approximately 95% of the data,
   #outlier represents the top 2.5%, which is an extremely high value
```

```
]: 0    True
   1    False
   2    False
   3    False
   4    False
   5    False
   6    False
   7    False
```
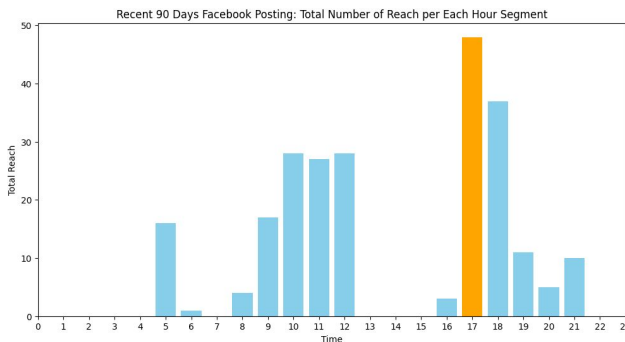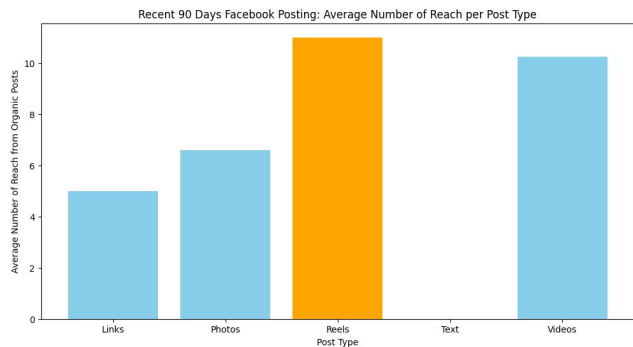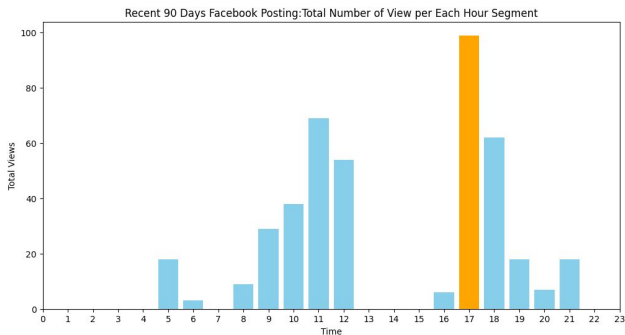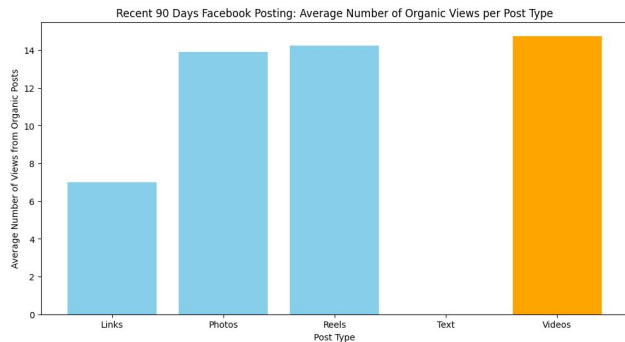
Title		Date published	Status	Reach ⓘ	Likes and reactions	ⓘ Comments ⓘ	Shares ⓘ
Ad completed	Boost ···	Mon May 19, 5:09pm 🚀		2.1K	5	0	0
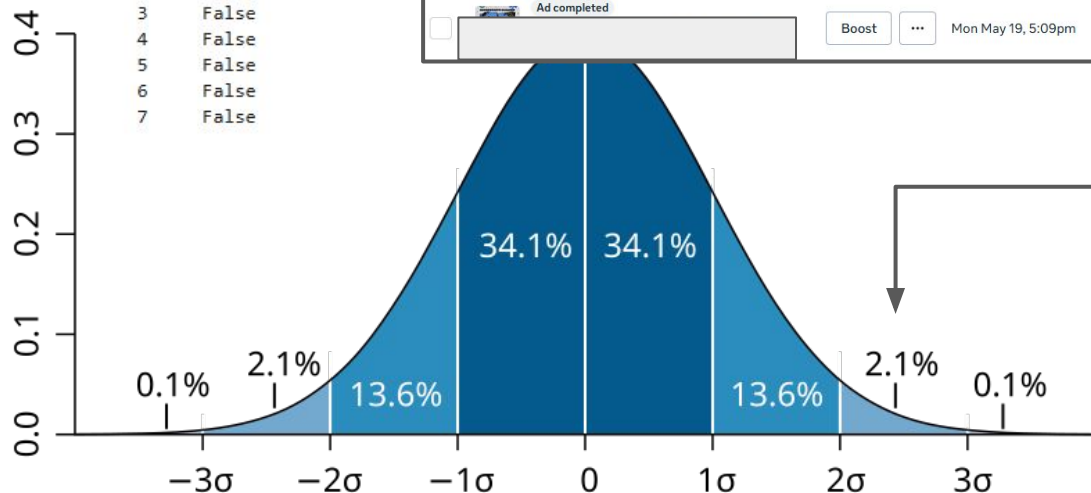
- Identified notably high values in Instagram views and reach data
- Cross-referenced with Meta Business analytics - spikes corresponded to successful paid campaign activities
- Current priority: optimizing organic content strategy while building our dataset
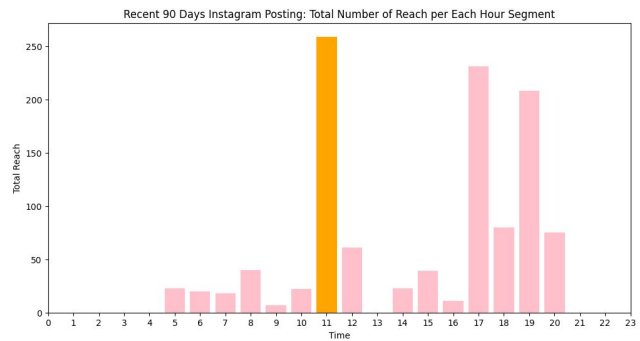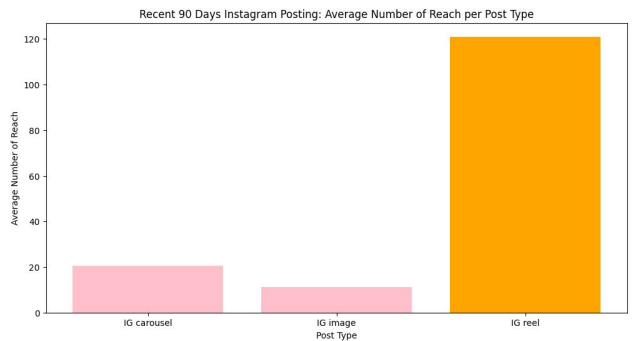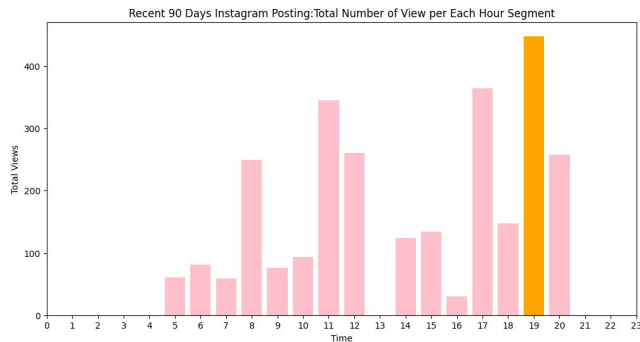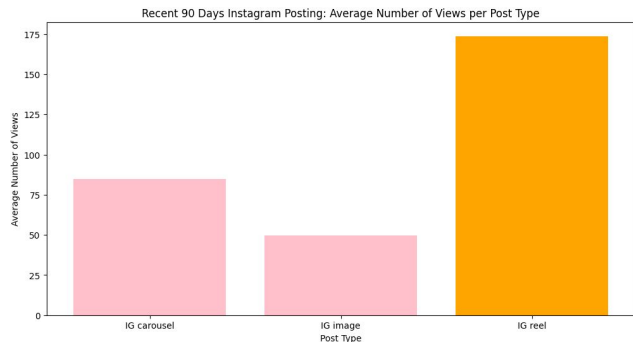
FACEBOOK USER BEHAVIOR ANALYSIS

Recent 90 Days Facebook Posting: Average Number of Organic Views per Post Type

Recent 90 Days Facebook Posting:Total Number of View per Each Hour Segment

Recent 90 Days Facebook Posting: Average Number of Reach per Post Type

Recent 90 Days Facebook Posting: Total Number of Reach per Each Hour Segment

- **Video**, **reels**, and **photos** generate similar view counts, but **reels** and **videos** achieve significantly higher reach, indicating stronger distribution potential
- **Peak engagement** occurs during **5pm - 6pm**, followed by 11am - 12pm, presenting optimal posting windows for maximum visibility
- Recommendation: **Prioritize video and reel content**, and conduct **A/B testing** across peak time periods to optimize **content-audience alignment**

INSTAGRAM USER BEHAVIOR ANALYSIS

Recent 90 Days Instagram Posting: Average Number of Views per Post Type

Recent 90 Days Instagram Posting:Total Number of View per Each Hour Segment

Recent 90 Days Instagram Posting: Average Number of Reach per Post Type

Recent 90 Days Instagram Posting: Total Number of Reach per Each Hour Segment

- For Instagram as well, **Instagram reels** consistently deliver the highest views and reach across all content types
- Peak **reach** occurs at 11am, followed by 5pm and 7pm, while peak **viewing** happens at 7pm, then 11am and 5pm - revealing three consistent time windes **(11am, 5pm, 7pm)** for strategic audience targeting, though with **different engagement patterns**.
- Recommendation: **Prioritize Instagram reels** while expanding **data collectio**n and implementing **time-specific A/B testing** to optimize content-timing combinations for maximum audience engagement