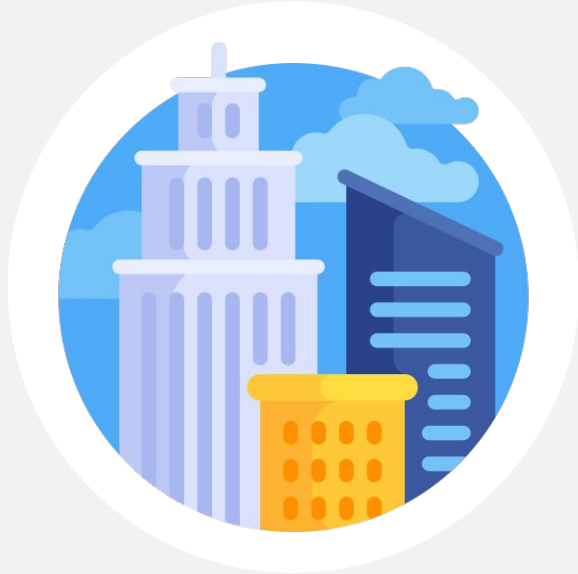




# COOP Capstone Project

Cohort C580

# Introduction



StratusLink Communications is a telecommunications provider that offers a comprehensive suite of connectivity and digital services tailored to individual and enterprise clients.

This project aims to strategically expand the digital advertising efforts to gain a competitive advantage by making data-driven decisions to determine budget allocation.

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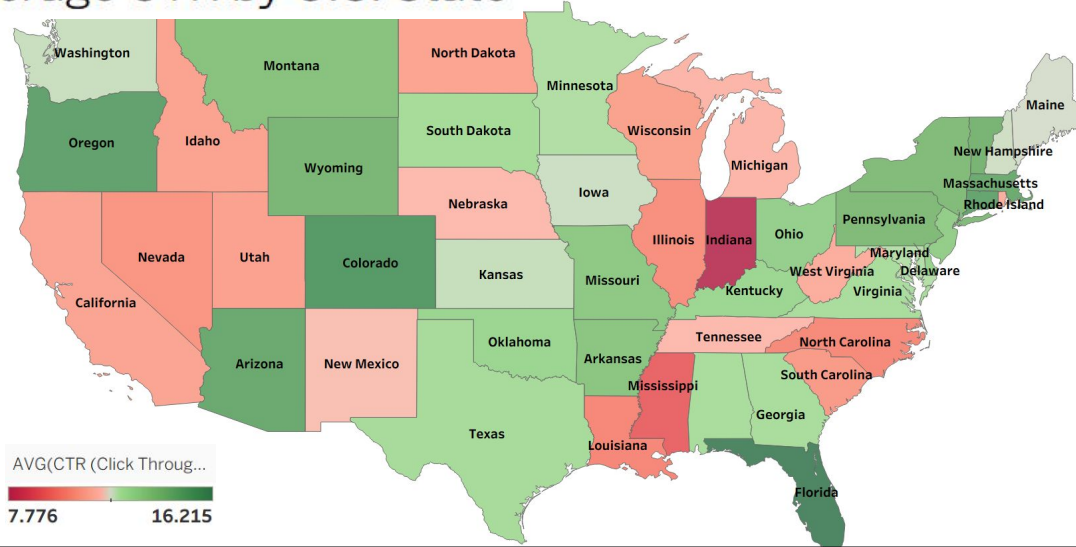
Victor Cabrera, Panagiotis Kavvouras, Mario Guerrero & Sekou Bangoura

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# Spatial Analyst

# US States Branding Metrics - CTR & Viewability

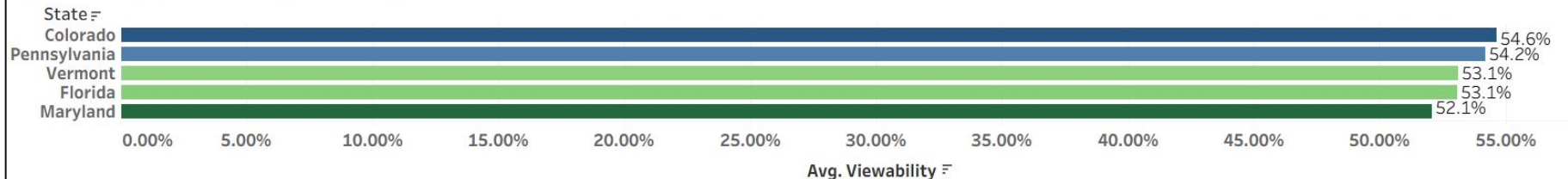
## Average CTR by U.S. State



## Insights

- **Florida** leads, its #1 in viewable impressions (**7.9M**) and the highest CTR (**16.2%**).
- **Connecticut** has High CTR (**14.9%**) but Low viewability (**41.2%**). So this indicates that ads are seen but placement is weak so improving inventory could make it a much stronger performer.
- **Indiana** is by far the weakest state across different metrics, has lowest CTR (**7.8%**) and viewability below average (**43.9%**).

## Top 5 AVG Viewability % States



# Branding Metrics - Region & Urbanicity

REGION	AVG CTR(%)	AVG Viewability(%)	Total Viewable Impressions
Northeast	13.11%	48.87%	42.1M
South	12.27%	48.60%	79.3M
West	12.98%	48.90%	50.8M
Midwest	11.63%	48.51%	46.4M

- The **Northeast** has the highest CTR (**13.11%**) which means it is the region with the strongest ad engagement. The **West** has the highest viewability (**48.90%**).
- The **South** has the most viewable impressions (**79.3M**), but this may be due to a higher allocated spend. Meanwhile, the **Midwest** underperforms in CTR (**11.63%**) and is the weakest overall across multiple metrics.

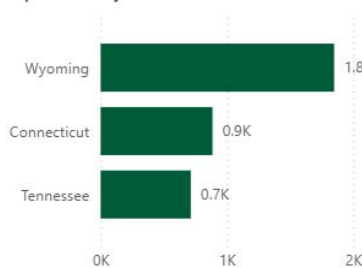
URBANICITY	Avg CTR(%)	AVG Viewability(%)	Total Viewable Impressions
Urban	12.49%	49.30%	78.1M
Suburban	12.78%	48.56%	78.6M
Rural	11.99%	48.15%	61.9M

- Urban** has strong total impressions (**78.1M**) and solid viewability (**49.30%**).
- Suburban** has the highest CTR (**12.78%**) and the highest total impressions (**78.6M**), making it the overall top-performing environment.
- Rural** is the lowest across all metrics, and we should carefully evaluate this environment before allocating additional spend.

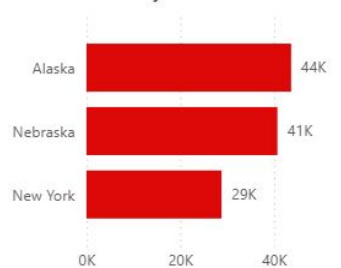
# Key Advertising Highlights - CPA, CVR and CPA

- Best-performing states:** Connecticut, Tennessee, and Wyoming show the lowest CPA, highest CVR, and lowest CPM.
- Worst-performing states:** Alaska, Nebraska, New York, Alabama, Iowa, and Michigan show high CPA or CPM and weaker conversion efficiency.
- Audience patterns:** Younger users (18–30) have lower CPA and higher CVR, while older audiences are more expensive to reach and convert.
- Device trends:** Smartphones deliver lower CPA and CPM; desktop traffic is the least cost-efficient.
- Gender impact:** Minimal effect on CVR, but males show higher CPA and CPM than other groups.

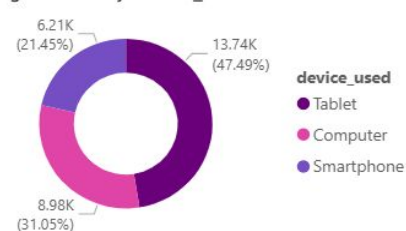
Top 3 CPA by state



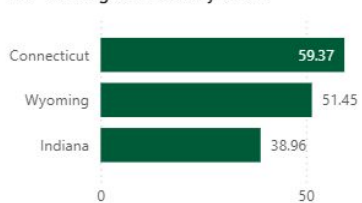
Bottom 3 CPA by state



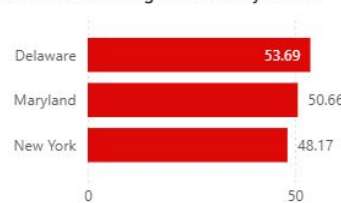
Average of CPA by device\_used



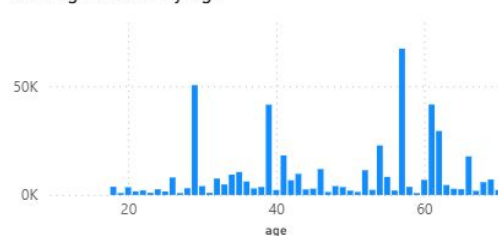
TOP average of CVR by state



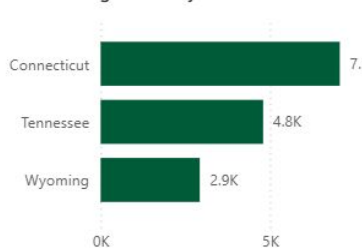
BOTTOM average of CVR by state



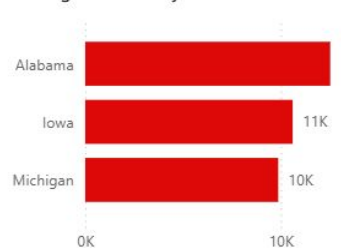
Average of CPA by age



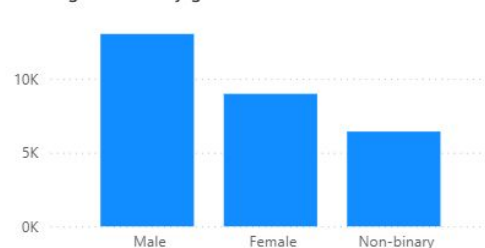
TOP Average CPM by state



Average of CPM by state



Average of CPA by gender



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Olivia Pan, Karla Martinez, Marieli Mota, Rachel Rubio

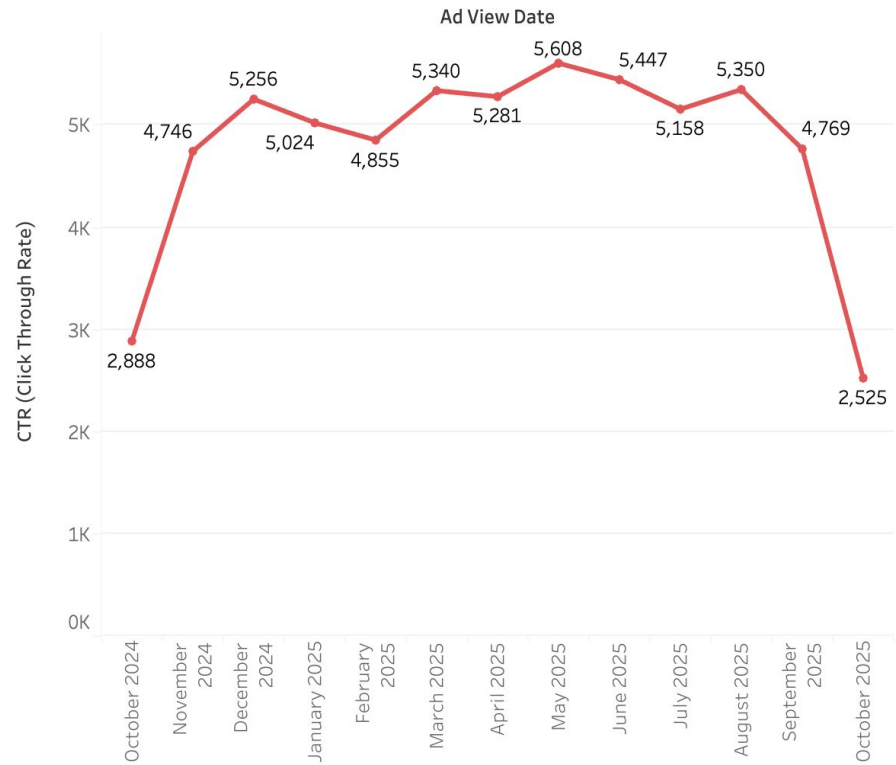
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# Audience Analyst



# CPA & CTR

CTR Monthly Performance

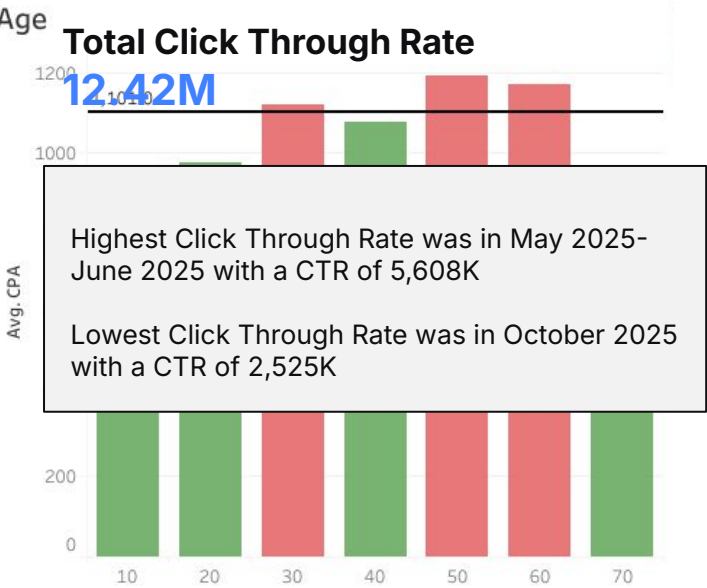


## CPA Benchmark

\$1,101

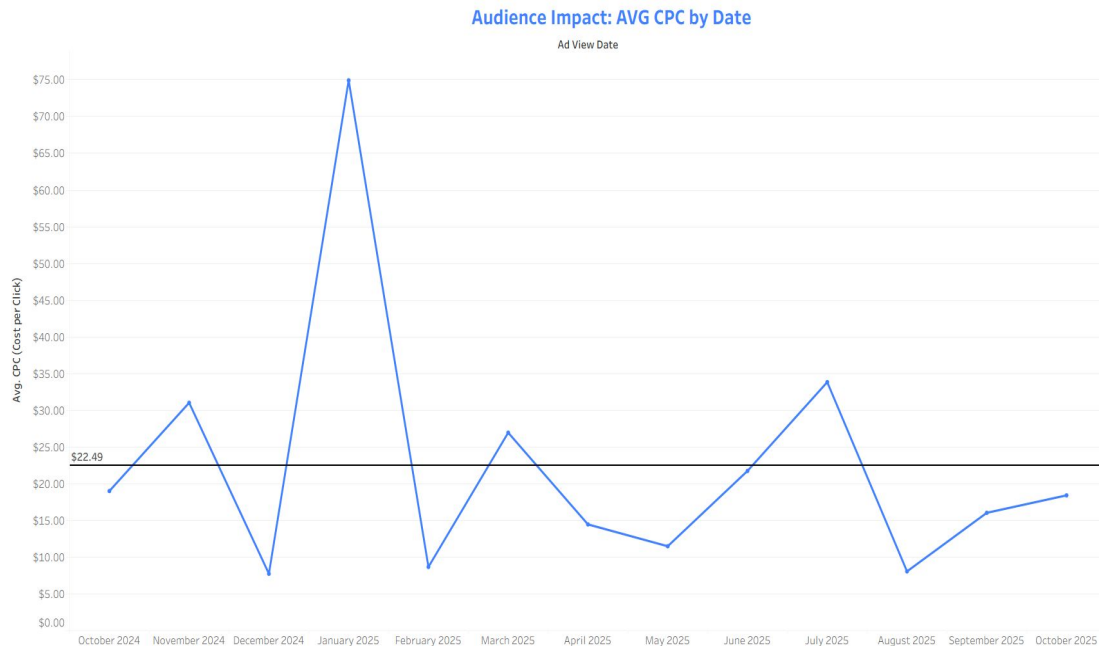
## Age Total Click Through Rate

12.42M





# CPC



**Baseline of Total Clicks**

**4,220,759**

Highest sum of clicks was in  
May 2025 totaling **10,290,256**

Lowest sum of clicks was for  
Oct 2025 reaching the  
**constant value**

# CPM + vCPM + CVR

## vCPM Over Time (2024-2025)

Shows monthly shifts in viewable cost per 1,000 impressions (vCPM) over time



## Insights

### CPM

- **Lowest CPM (\$63-\$64)** occurs in **April-May**
- **Highest CPM (\$98)** occurs in **January**

### Viewable CPM

- **vCPM (~\$1,312)** peaks in **November 2024** because of holiday-season competition
- **August-September** show **lower vCPM (\$905-\$935)** as inventory expands and demand softens

### CVR

- **CVR peaks (~\$55)** in **March** and **October 2025**, indicating stronger user intent during key seasonal periods.
- **Summer months** show a **dip to \$48-\$49**, consistent with lower engagement.

# Personas



**Gen Z Student**

**Name: Maya Johnson**

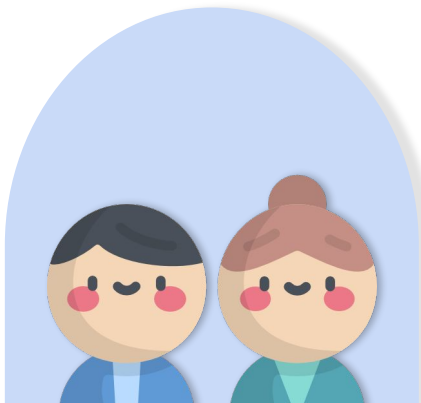
**Gender: Female**

**Marital Status: Single**

**Location: Boston**

**Age: 20s**

**Occupation: Full-time college student**



**Family Focused Planner**

**Name: Daniel Reyes**

**Gender: Male**

**Marital Status: Married**

**Location: New York City**

**Age: 40s**

**Occupation: Project manager**



**Craftswoman**

**Name: Barbara Walter**

**Gender: Non-binary**

**Marital Status: Widowed**

**Location: Texas**

**Age: 70s**

**Occupation: Laborer/Retired**

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Kadija Abdoulaye, Julia Cordova, Tasmim Hanif

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# Creative Analyst

# Creative Sizing Reference

**0: 160x600px**



**4: 320x50px**

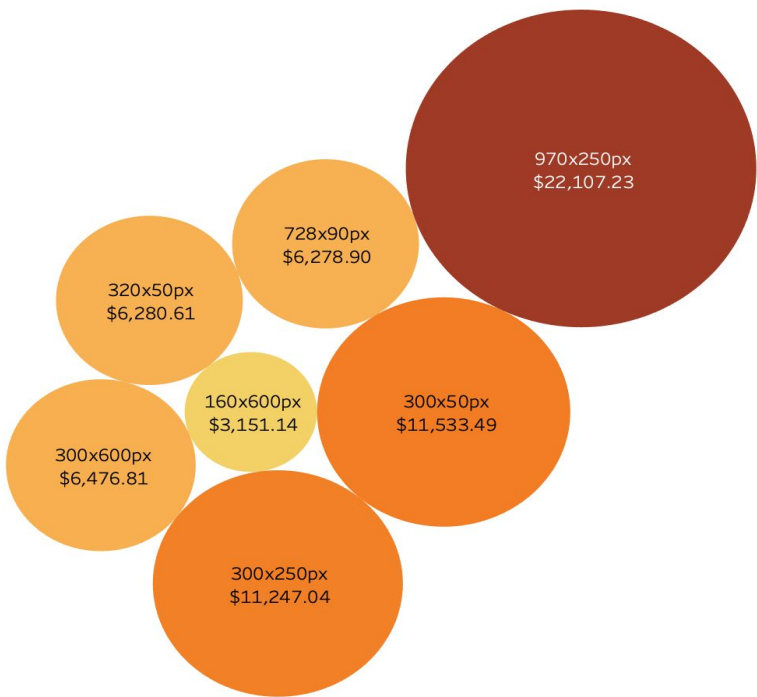


**5: 728x90px**

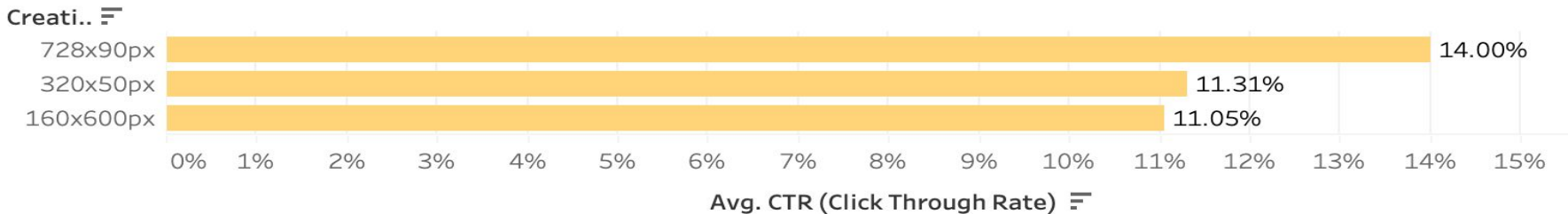


The top-performing creative size is 728×90px. It has one of the lowest cost per acquisitions and consistently achieves the strongest overall performance across key engagement and efficiency metrics.

CPA Performance Across Creative Sizes

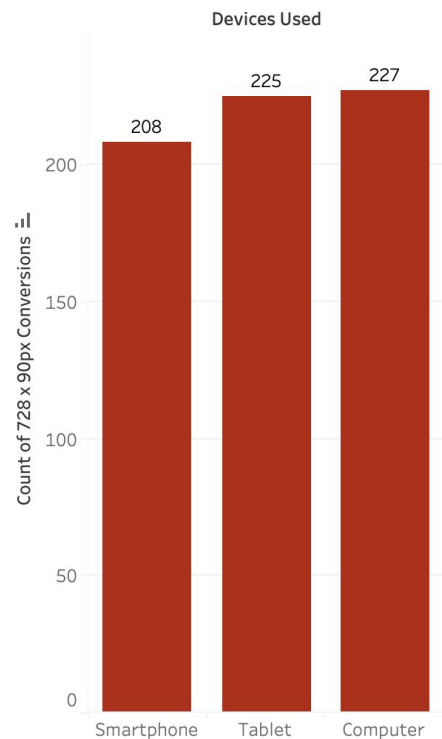


Top-Performing Creative Sizes by CTR

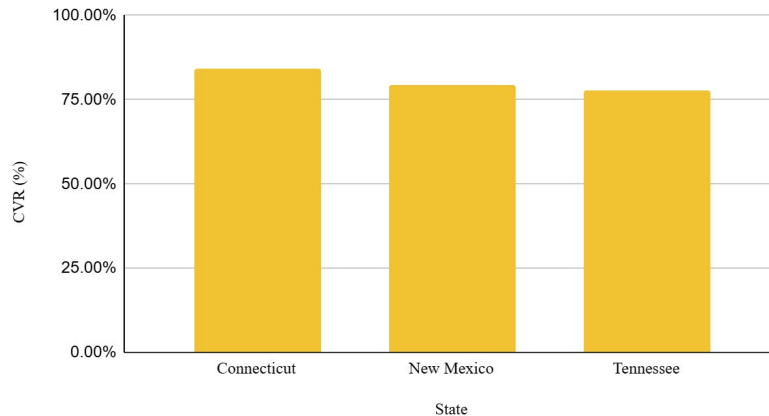


The 728×90px size is used the most on computers, with the second closest being tablets.

Devices Used for 728x90px

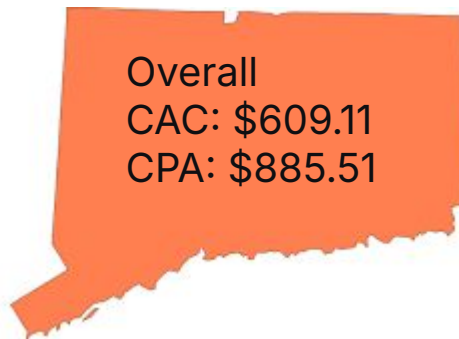


Size 728x90px Top 3 states CVR

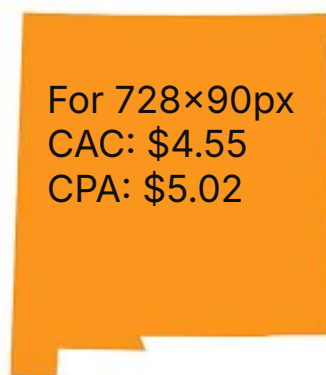


The CVR being the highest in Connecticut at 84.21 %, New Mexico at 79.56%

## Connecticut



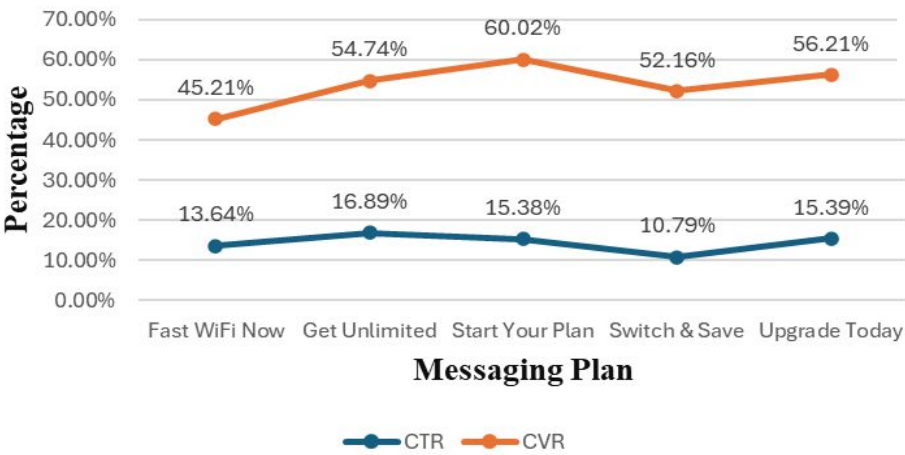
## New Mexico



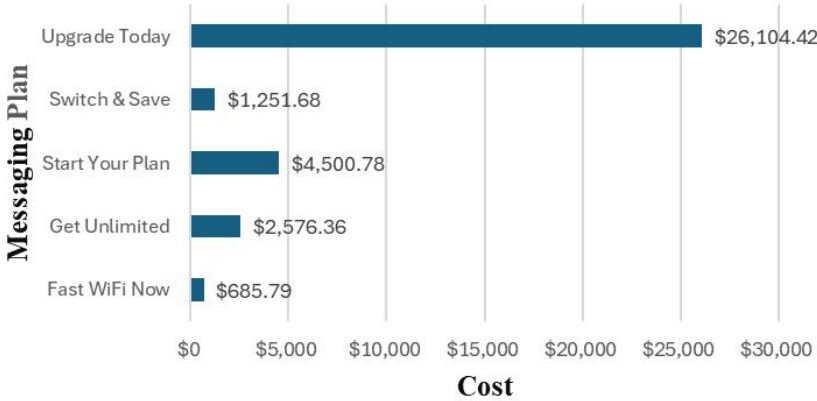
# Top Messaging Plan Using 728X90px size

*Get Unlimited* is the best overall performer for 728x90px size because it combines high CTR, strong CVR, and a reasonable CPA.

728X80 Size CVR & CTR Comparison



Cost Per Acquisition





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Aneesa Zaman, Helen Lin, Ismael Sinani, & Haseeb Javad

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# Media Inventory



# Key Findings Before Deep Dive

## Campaign Performance: Initial Insights

- Most publishers delivered 45–55% viewability — **below the 60% goal**
- Higher viewability tends to lead to stronger CTR and CVR
- A clear split emerged between high-performing and low-performing publishers
- Early analysis suggested 5 publishers consistently deliver better visibility & engagement
- Several publishers under-delivered on both visibility and efficiency

# Inventory Performance Dashboard

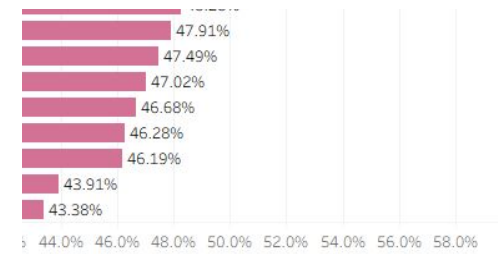
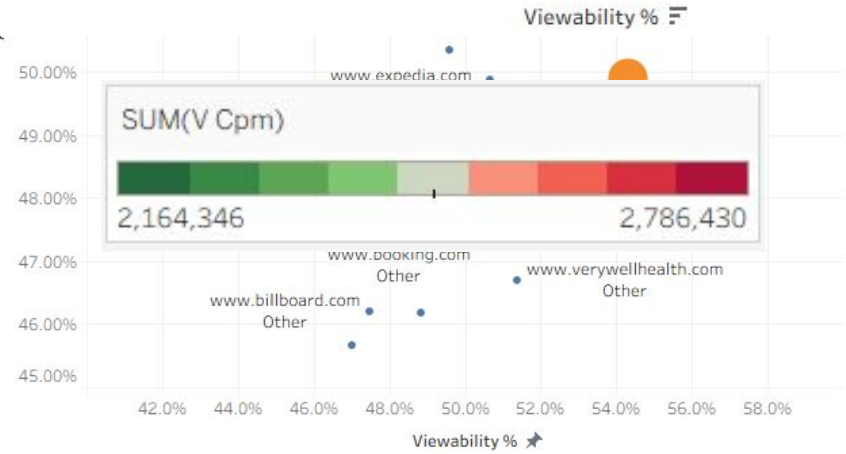
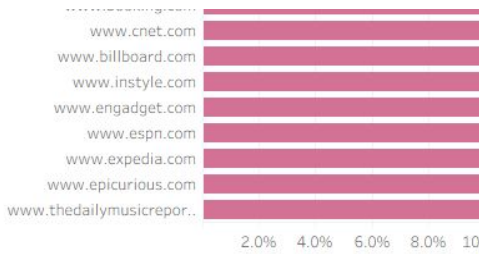
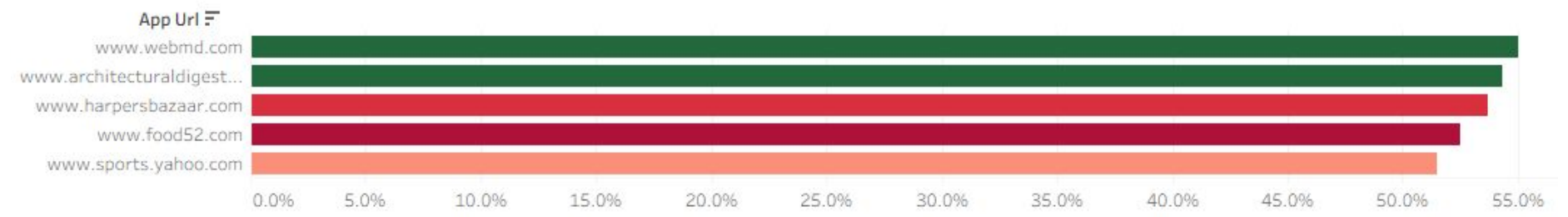
Viewability % by Publisher



CTR vs Viewability Scatter Plot

Top 5 publishers highlighted

Top 5 Publishers by Viewability %



# Final Recommendations

## Top 5 Recommended Direct Buy Publishers

- **WebMD** — highest viewability (55.03%), strong CTR & CVR, medically-engaged audience.
- **Architectural Digest** — 54.31% viewability, premium lifestyle audience, strong CTR.
- **Food52** — 52.50% viewability, strong CTR/CVR, high-quality impressions.
- **Sports.Yahoo** — 51.50% viewability, excellent CTR, large scalable audience.
- **Houzz** — 51.04% viewability, strong audience quality, consistent CTR

## Underperforming Publishers

Some publishers consistently under-delivered:

- **Billboard**
- **Expedia**
- **Instyle**

They failed to meet the 60% viewability threshold, had weak CTR, and produced inefficient vCPM. These sites should be deprioritized to reduce wasted spend.

## Suggested Buy Rates

- CPM: \$5–\$8
- vCPM target: < \$20,000 (based on your campaign average)
- CPC: \$0.40–\$0.60
- CPA: \$90–\$100

# Conclusion

- **Spatial Analyst:**

For optimizing the campaign at the geographical level, we recommend that scaling efforts should **focus on high-performing states (Florida, Connecticut), suburban audiences with mobile devices**, and strong regions like the **Northeast and the West**. While weak-performing locations like Rural Indiana in the Midwest need a lot of optimization in terms of ad placement and creative messaging, before we allocate more budget to it.

- **Audience Analyst:**

To optimize campaign performance, strategically allocate budget to high-performing, **cost-efficient months like March, April, May, August, and September** while **tightening budgets during high-competition periods like January, July, and November** by focusing on high-value audience segments. Prioritize acquisition-driven campaigns in **March and October when conversion rates peak**, shift to awareness campaigns during summer months when engagement dips, and **continuously test new creative strategies and audience segmentation to maintain performance throughout the year**. Finally, leverage the successful targeting and creative elements from peak performance months to guide future campaigns and prevent steep declines in engagement.

- **Creative Analyst:**

We recommend prioritizing the **728×90px size since it drives the lowest costs and strongest conversions**, especially in **Connecticut and New Mexico**, and performs best when paired with the **'Get Unlimited' message**. To maximize visibility and engagement, focus this size on desktop placements, with top-of-page or sidebar positions in Native or Rich Media formats.

- **Inventory Analyst:**

To improve campaign quality and move closer to the **60 percent viewability goal**, we recommend **shifting more budget toward the top performing publishers such as WebMD, Architectural Digest, Harper's Bazaar, Sports Yahoo, and Food52**. These partners delivered the strongest viewability, engagement, and overall efficiency, making them the most reliable sources of high quality impressions. We also recommend **securing direct buy rates in the five to eight dollar CPM range will further ensure access to premium inventory and help stabilize results across future campaigns**.

# Thank you!