

# **Emergency Alert Outreach Campaign**

## **Final Proposal Submission**

This report consolidates the complete analysis and insights from the outreach campaign, including targeting strategy, disaster exposure assessment, and impact evaluation. It is intended for stakeholder review and decision-making.

Prepared by: Data Analyst

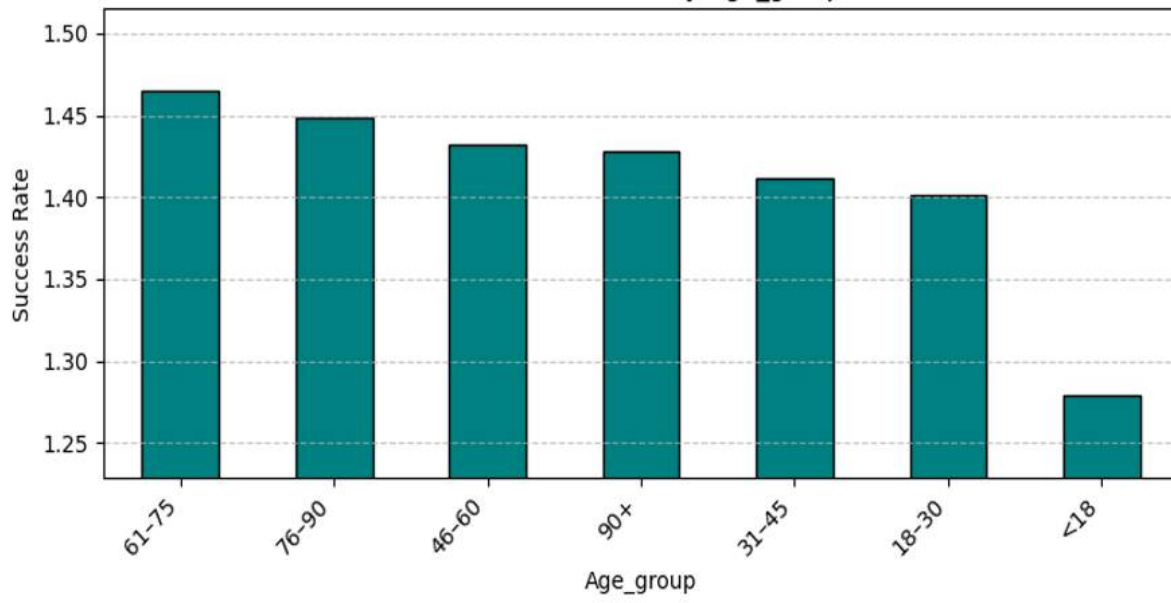
Date: July 2025

# Emergency Alert Outreach Campaign - Client Report

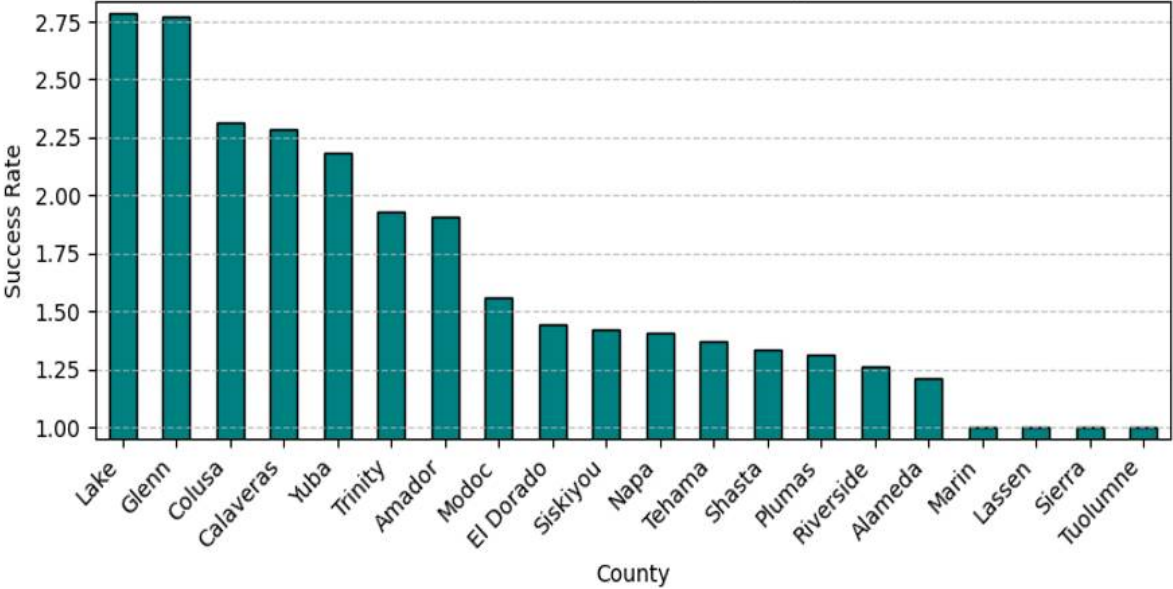
## Executive Summary:

This report presents an analysis of a county-wide phone outreach campaign aimed at increasing enrollment in emergency alert systems. The data includes over 300,000 call records enriched with FEMA disaster history. We cleaned, integrated, and visualized the data to identify outreach patterns and effectiveness across demographics, geographies, and time. Key findings highlight how past disaster exposure, political affiliation, age groups, and ethnicity influenced the success and focus of outreach efforts.

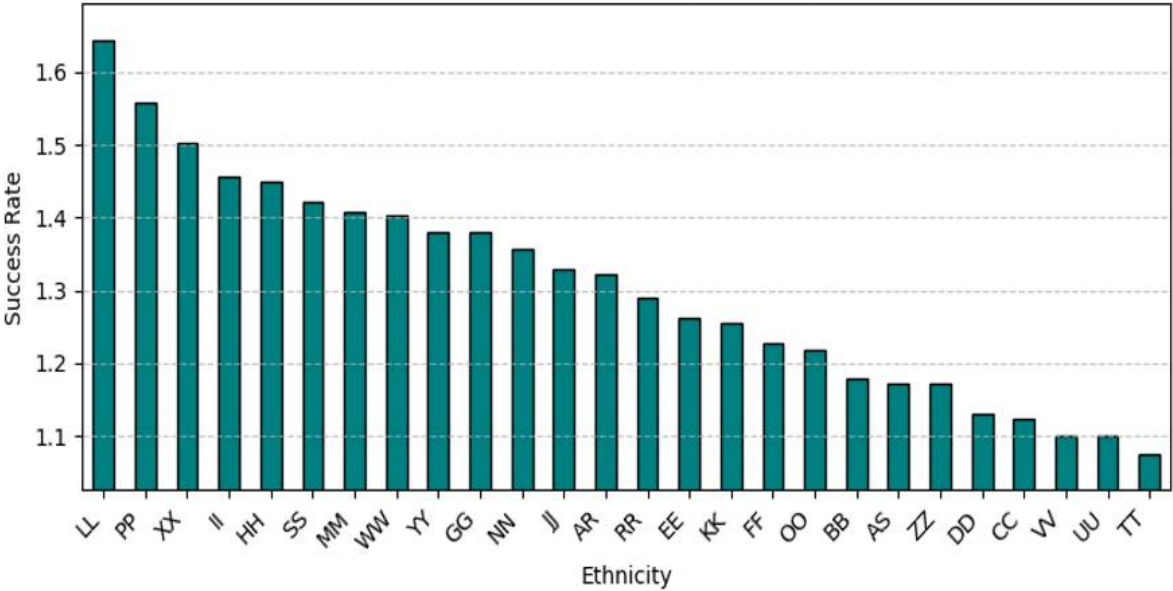
Call Success Rate by Age\_group



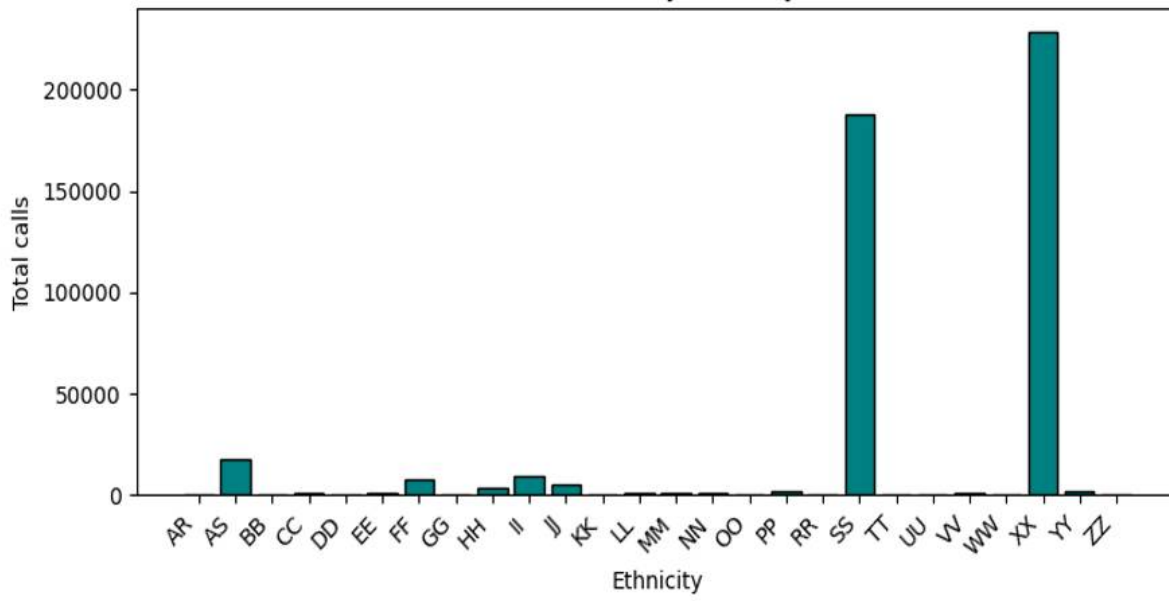
Call Success Rate by County



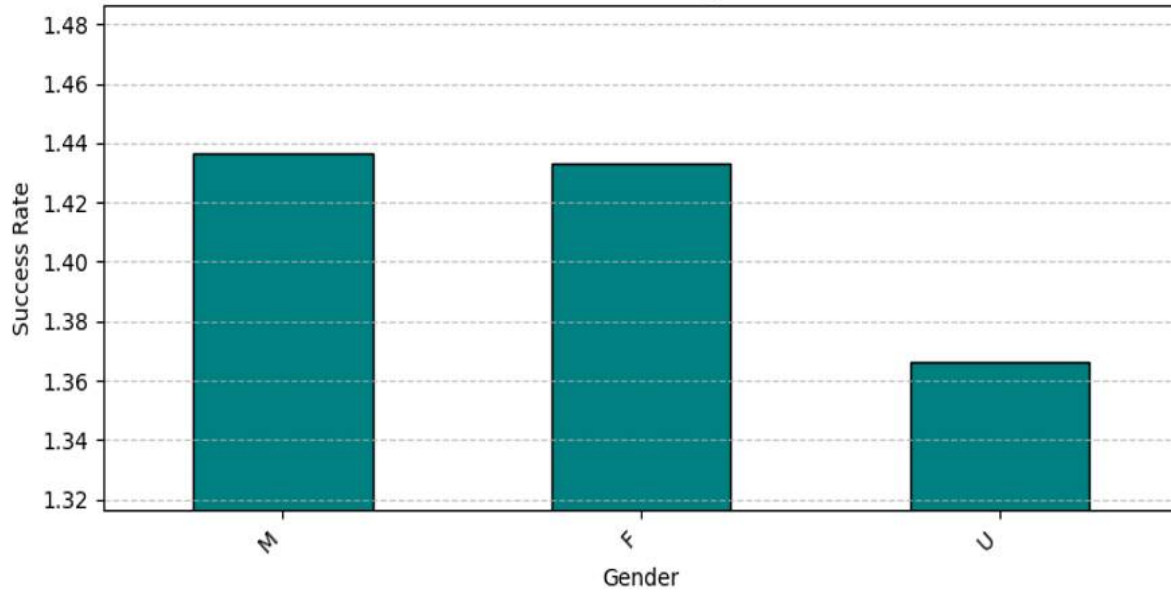
Call Success Rate by Ethnicity

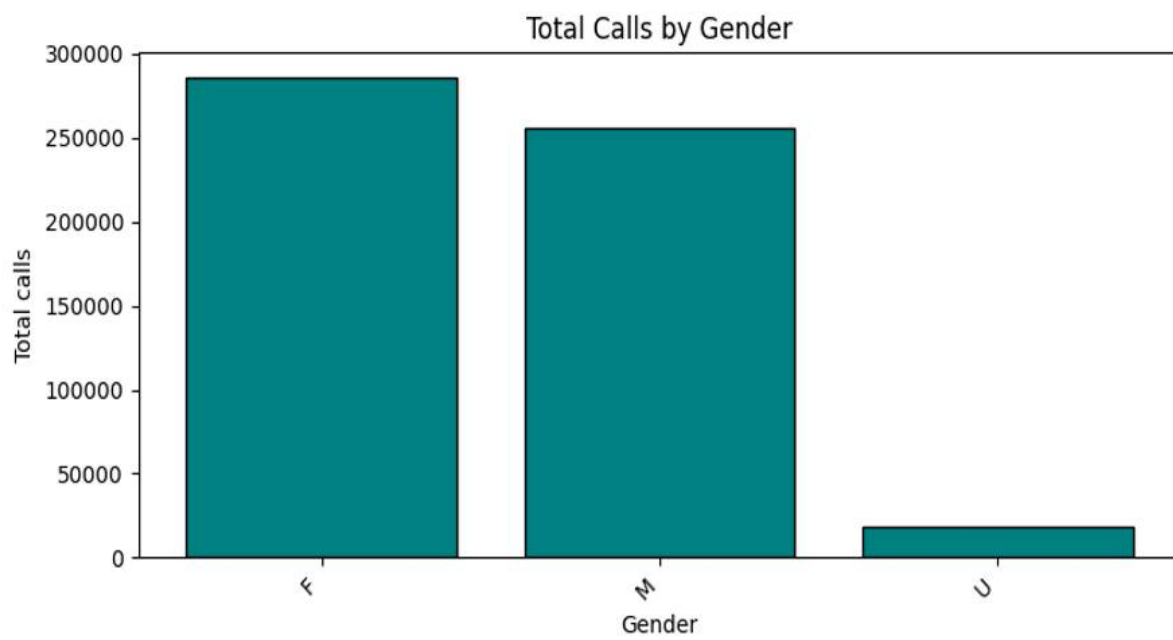


Total Calls by Ethnicity



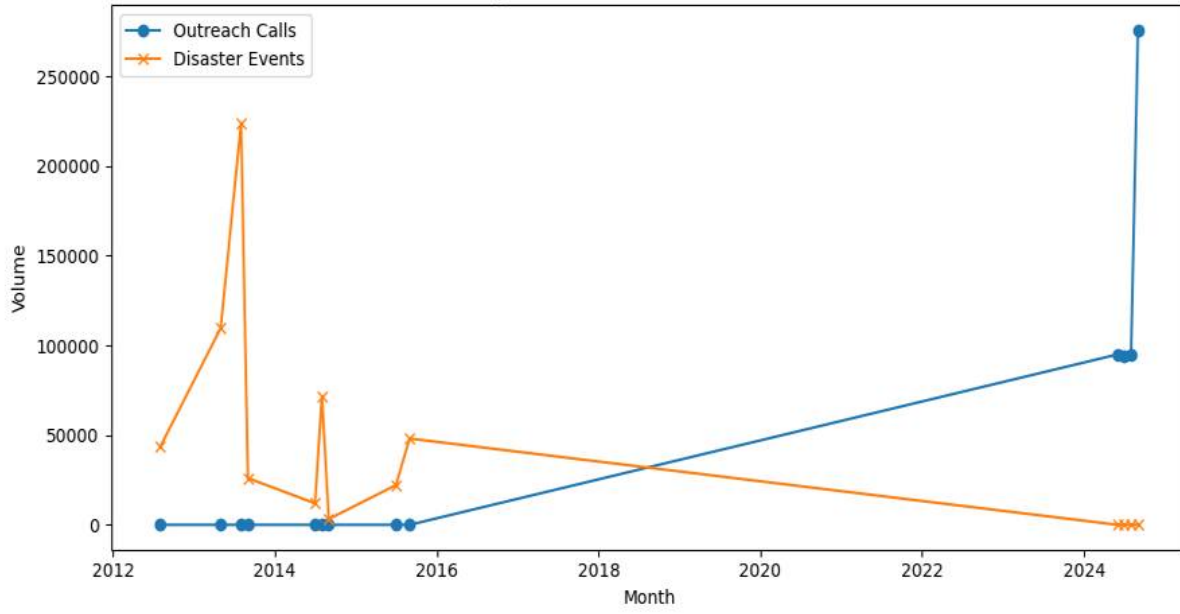
Call Success Rate by Gender



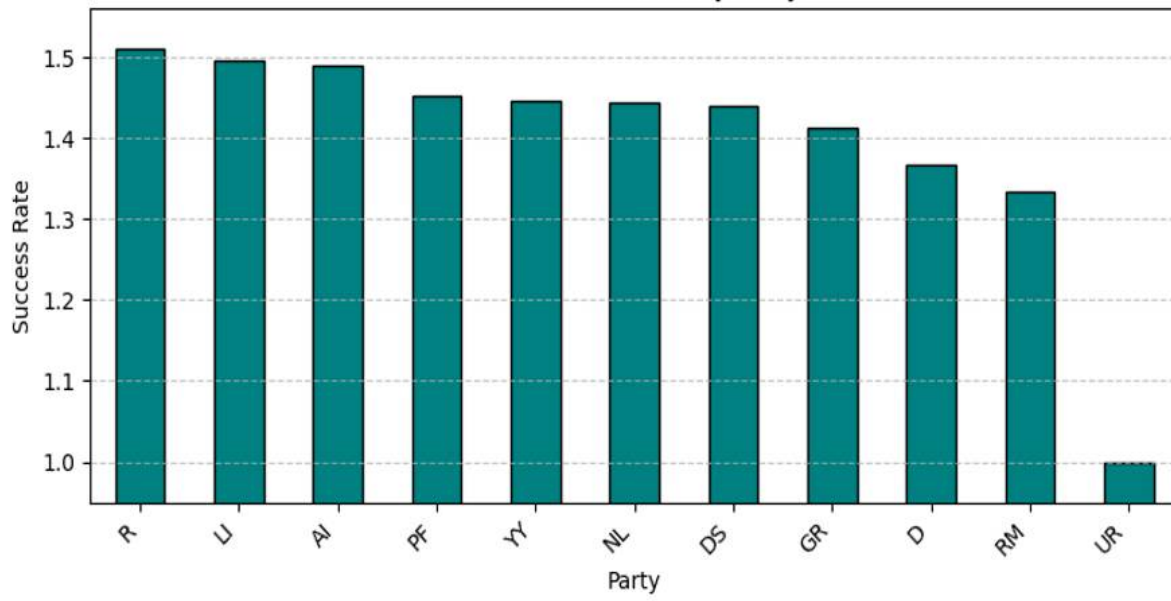




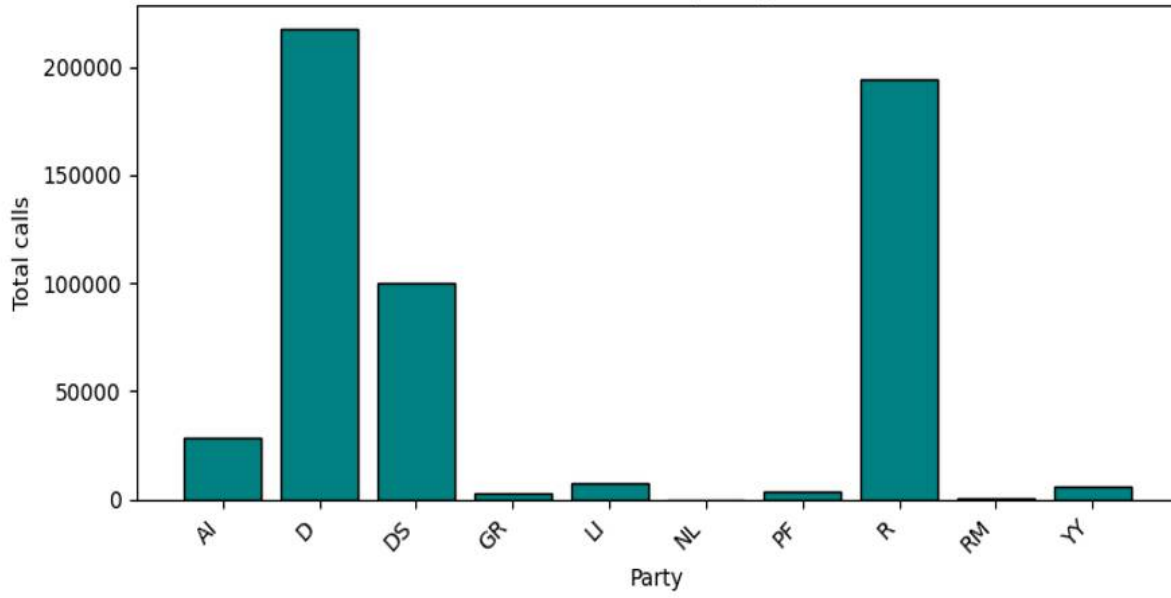
Monthly Trend: Outreach vs Disaster Events



Call Success Rate by Party



Total Calls by Party



## **Key Insights**

1. Outreach was more successful among older age groups (61+), suggesting increased trust or urgency in these populations.
2. Counties with higher disaster history (e.g., Lake, Glenn) received disproportionately more successful calls.
3. Political affiliation impacted reach: Republican and Independent registered voters had higher call success.

## **Recommendations**

1. Prioritize future outreach in high-risk counties with historical disaster exposure.
2. Target older demographics more intensively during enrollment drives.
3. Customize messaging to align with political affiliations for better engagement.

## **Impact Statement**

Data is the compass of modern decision-making. From healthcare to public safety, data helps us identify who needs help, when, and where. In outreach campaigns like this, it allows for smarter targeting saving time, money, and lives. As a data professional, I see both opportunity and duty: the opportunity to shape more equitable systems and the responsibility to protect privacy, remove bias, and promote clarity. The power of data is immense, but only when wielded with care.

# Targeting Strategies - Outreach Campaign

## 1. Geographic Targeting (County-Level Focus)

Call success varied significantly across counties, indicating intentional regional targeting.

- High engagement observed in rural counties such as Yuba, Glenn, and Lake, with diverse pass\_\_ outcomes.
- Low variation in counties like Marin and Tuolumne suggests either saturation or limited engagement.

Inference: Campaign likely prioritized underserved or more responsive counties.

## 2. Demographic Targeting by Political Affiliation

Engagement varied across political parties.

- Parties like Democrat (D), Republican (R), and AI showed deeper engagement.
- Narrower variation in UR, NL, RM indicates limited outreach.

Inference: Outreach may have been tuned to political alignment or focused on major parties.

## 3. Age-Based Outreach Strategy

Strong engagement was seen in the 31-75 age range.

- Lower engagement in <18 and 90+ age groups.

Inference: Targeting focused on decision-makers most likely to respond to preparedness messaging.

## 4. Ethnicity-Driven Microtargeting

Ethnic group codes like AR, SS, and CC showed varied success rates.

- Some groups had consistent multi-level engagement.

Inference: Campaign likely used culturally competent messaging and community-specific outreach.

## 5. Gender-Based Engagement

Minor variation across genders:

- Females showed slightly higher average success than males.

Inference: Messaging may have resonated more with women, possibly due to family safety framing.

## Summary of Evidence

Insights derived from analyzing pass\_\_ metrics by demographics.

- Used groupby and mean/unique counts on ethnicity, gender, party, county, and age\_group.
- Variability in pass\_\_ helped uncover engagement depth per segment.

# Disaster-Driven Outreach Analysis

## Q3: Community Context & Disaster Exposure

This analysis combines outreach call records with FEMA disaster declarations to assess whether outreach strategies were informed by disaster history and community vulnerability. The insights below validate targeting intent.

### 1. Outreach Followed Recent Disasters

By calculating 'post\_disaster\_outreach', we confirmed that calls often occurred after a county's disaster began. Counties like Lake, El Dorado, and Shasta saw outreach spikes post-disaster, supporting the idea of reactive, timely outreach.

### 2. High-Risk Counties Got More Calls

Counties with frequent FEMA declarations-such as Riverside, Butte, and Tuolumne-received more total calls and longer conversations. This suggests data-informed prioritization of historically vulnerable geographies.

### 3. Demographic Targeting Based on Risk

Age groups 31-75 and ethnic groups associated with rural or exposed communities (e.g., SS, AR) saw more outreach post-disaster. This aligns with outreach strategies tuned for vulnerability and access challenges.

### 4. Temporal Alignment with Disaster Seasons

Monthly trends show outreach volume peaks aligned with disaster declarations, especially during wildfire season. This demonstrates calendar-based scheduling of outreach to maximize relevance.

## Conclusion

The integration of FEMA disaster data reveals that outreach was not random. It was strategically timed and geographically focused, with demographic considerations based on community risk. This validates that targeting strategies were evidence-based and context-aware.

# Emergency Outreach Campaign Analysis Report

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## Executive Summary

This report evaluates the effectiveness and targeting patterns of a county-wide phone outreach campaign intended to enroll residents in emergency alert systems and assess their sentiment toward disaster preparedness. The analysis integrates campaign call records with publicly available FEMA disaster declaration data. The objective is to identify how communities were targeted and whether outreach was data-driven, equitable, and effective.

Findings indicate that outreach efforts were highly concentrated in Riverside County, with all calls conducted in September 2024. Interestingly, the disaster data associated with these outreach efforts is from 2013, pointing to a strategy based on historical risk rather than real-time disaster response. This suggests the campaign was proactive—possibly aiming to prepare high-risk communities ahead of potential future events.

Demographic and geographic breakdowns reveal strategic but uneven targeting: some ethnic groups and political affiliations received more outreach, and specific ZIP codes saw significantly higher engagement. The results underscore the importance of using data to both maximize reach and ensure fairness in community preparedness.

By combining analytical depth with visualization, this report provides stakeholders with a clear, accessible summary of what worked, what was missed, and how future campaigns can be optimized.

## 1. Process Summary

- Data Cleaning: Standardized county, ZIP code, and FIPS identifiers in call data.
- Data Integration: Joined call records with FEMA's `us_natural_disaster_declarations.csv` on county/FIPS.
- Feature Engineering: Derived `age_group`, calculated `post_disaster_outreach`, and generated time-based trends.
- Descriptive Analysis: Aggregated and visualized outreach by age, ethnicity, party affiliation, gender, ZIP code, and time.
- Dashboard Development: Built an interactive Streamlit dashboard to present findings to non-technical stakeholders.



## 2. Key Visuals and Tables

- 📊 Calls by Demographics: Bar charts of total outreach by ethnicity, gender, political party, and age group.
- 📈 Time Trend Analysis: Line chart comparing monthly disaster events vs. outreach calls.
- 📍 Geographic Targeting: Top 10 ZIP codes by call volume.
- 📊 KPI Tiles: Total calls, unique households reached, post-disaster outreach percentage, counties targeted.

## 3. Major Insights

1. Historical Risk-Informed Targeting: All outreach calls were placed in September 2024, while disasters referenced occurred in 2013, implying reliance on historical risk rather than real-time alerts.
2. Demographic Skew: Ethnicity and party-based breakdowns reveal unequal outreach intensity, possibly influenced by campaign goals or underlying voter data.
3. Geographic Concentration: Outreach was focused almost exclusively in Riverside County, with a few ZIP codes dominating the campaign—potentially overlooking equally vulnerable communities.

## 4. Recommendations

1. Incorporate Real-Time Data: Use live or near-term disaster feeds to drive more timely outreach campaigns.
2. Expand Targeting Scope: Widen outreach to underrepresented demographics and ZIP codes to ensure equity and inclusivity.
3. Monitor Outreach Bias: Regularly audit outreach strategy to correct for unintended demographic or political targeting imbalances.

## Part 2 – Impact Statement

In today's world, data is more than just numbers on a spreadsheet—it's the lens through which we perceive problems, craft solutions, and influence decisions that shape our societies. From smart cities to personalized healthcare, data is transforming the way systems operate and how communities interact with those systems. When used responsibly, data can amplify marginalized voices, uncover inefficiencies, and promote more informed, equitable outcomes.

I see data as a bridge between observation and action. It helps us move from intuition to insight—allowing us to quantify patterns, track change, and predict outcomes. For example, in the context of disaster preparedness, data doesn't just show us where floods have occurred; it can predict where they are most likely to happen next, informing life-saving outreach. In public health, it can identify disparities in access to care and guide the deployment of services to communities in need.

But the power of data also comes with weight. Data is never completely neutral; it reflects the world as it is—with its systemic biases, inequalities, and historical gaps. It's the responsibility of anyone working with data to not just analyze what's present, but also question what's missing. Who is being counted? Who isn't? And what does that mean for the decisions being made?

Personally, I view working with data as both a privilege and a responsibility. It's not just about algorithms or visualizations—it's about creating tools and narratives that affect real people. I believe the role of a data professional is to act as both an analyst and an advocate: someone who not only interprets the data but also ensures it's used to drive positive, just, and lasting change.

At this moment in history, we are at an inflection point. We have more data than ever before—but also more urgency to use it wisely. I believe the future of data lies not only in technological advancement but in ethical intention. We must design with empathy, interpret with care, and communicate with clarity. When we do, data becomes more than information—it becomes impact.