

INTRODUCTION

About the Dataset

- Contains **27,000+ outreach records** from Excelerate's student engagement process.
- Includes fields such as **App_ID, Country, Category, Outcome, Caller Name, and Timestamp**.
- Covers multiple **campaign categories** (Pre-Admission, Post-Admission, etc.).
- Represents communication attempts made across **diverse countries** and regions.

Objective of the EDA

- To analyze **outreach performance** and student response behavior.
- To identify patterns in **positive responses, conversions, and unreachable contacts**.
- To understand **monthly and yearly trends** in outreach activity.
- To evaluate **campaign category effectiveness**.
- To highlight **high-performing countries** and improvement areas.

Key Areas Analyzed

- Outreach volume over time (monthly & yearly).
- Outcome distribution (Connected, Not Connected, Positive, Negative).
- Country-wise response and conversion performance.

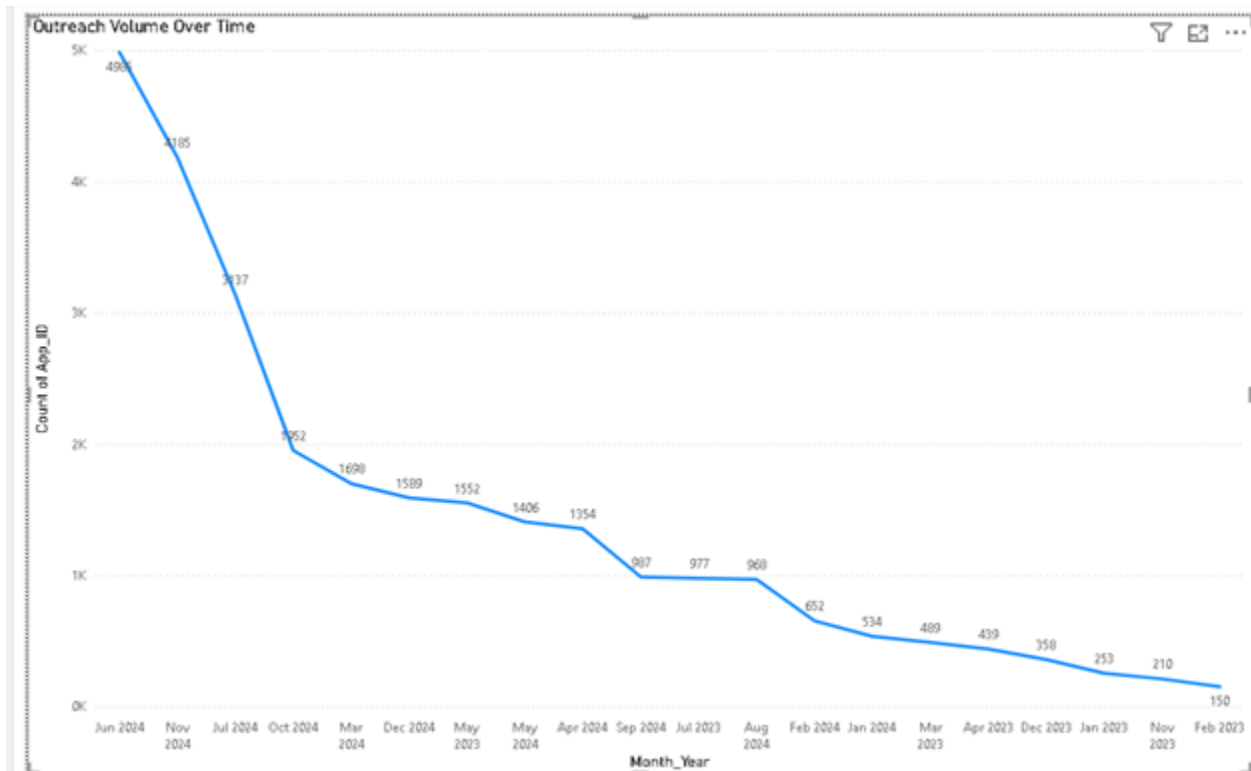
- Campaign category performance.
- Top countries by response rate.
- Engagement trends and seasonal patterns

| METRIC | Visualization Type | Insight Summary | Tool Used |
|---------------------------|--------------------|--|-----------|
| Outreach Volume Over Time | Line Chart | Outreach attempts have increased consistently month by month, showing growing engagement and campaign activity. | Power BI |
| Response Rate by Country | Stacked Bar Chart | Majority of countries had “Unreachable” outcomes, indicating low contact success. Only a few countries (like India and Nigeria) showed meaningful engagement such as “Interested” or “Not Interested” responses. | Power BI |

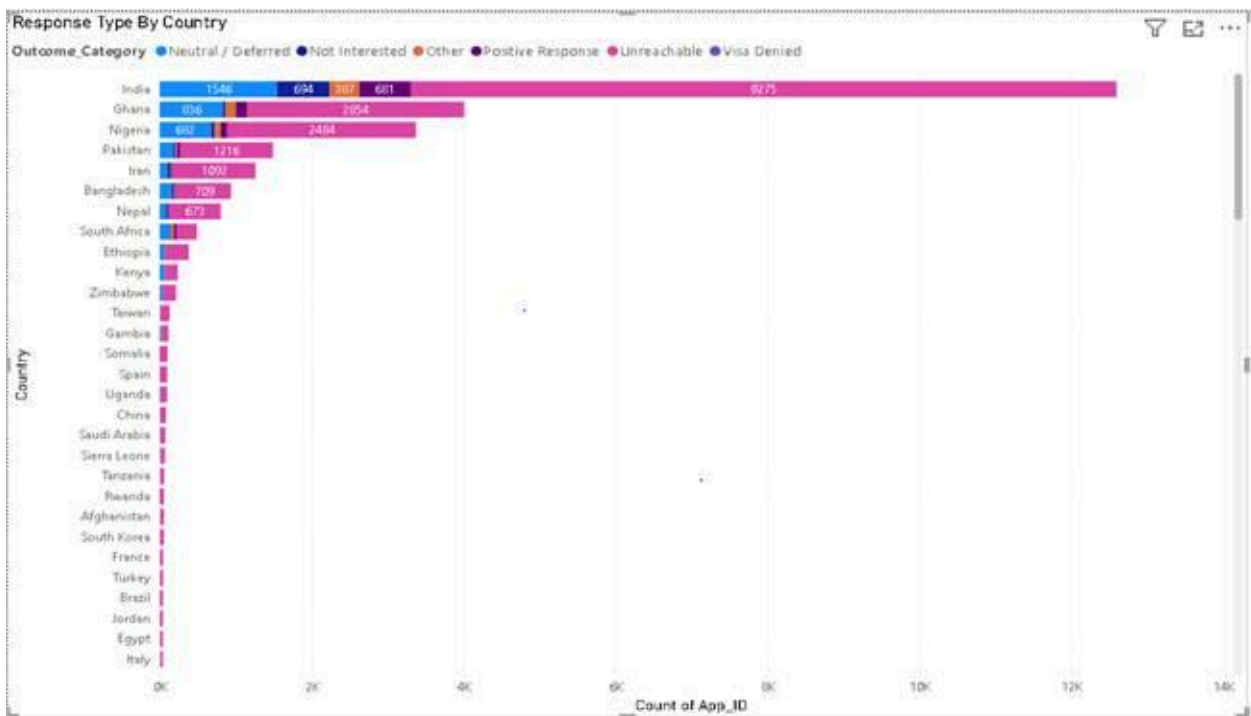
| | | | |
|-------------------------------|----------------------|--|----------|
| Campaign Category Performance | Stacked Column Chart | <p>“Post Admission” campaigns dominated outreach volume but had the highest proportion of unreachable outcomes. Smaller campaigns (like Pre Admission) showed slightly better engagement.</p> | Power BI |
| Outcome Effectiveness | Donut Chart | <p>Most outreach attempts resulted in “Unreachable” outcomes, while only a small portion were “Positive Responses.” This highlights a need to improve contact success and engagement rate.</p> | Power BI |

| | | | |
|--|--------------|--|----------|
| Outreach Timing Trend (Monthly and Yearly) | Column Chart | Outreach activity peaked in June, followed by November and July,2024. The lowest activity occurred in January,2023 November,2023 and February,2023 showing that engagement rises mid-year and again near year-end. This indicates seasonal cycles in outreach operations | Power BI |
|--|--------------|--|----------|

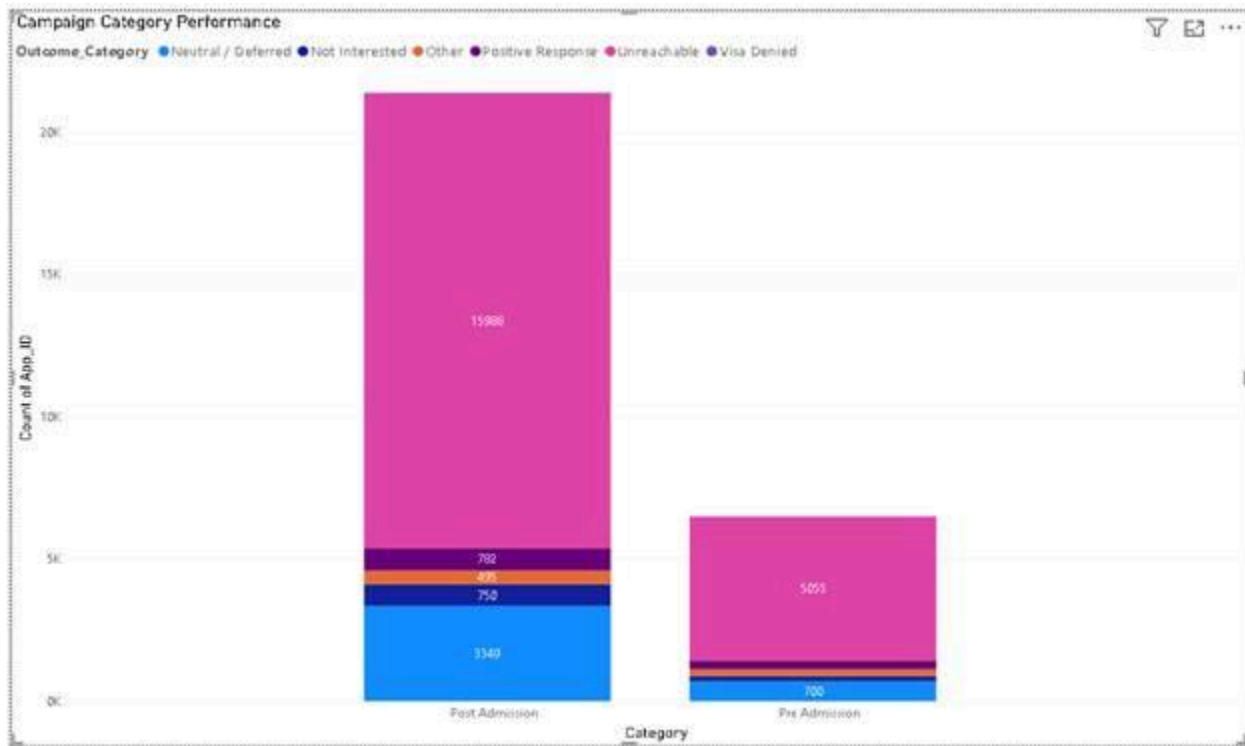
1. Outreach Volume Over Time



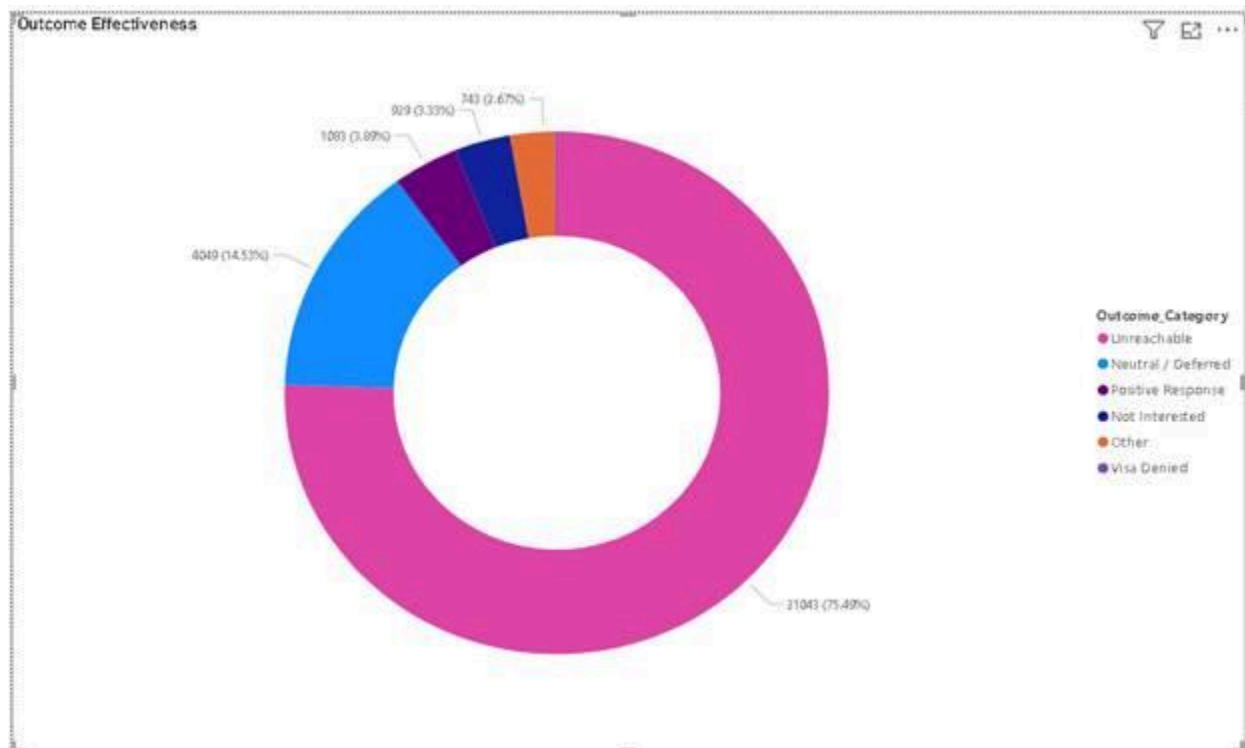
2. Response Type by Country



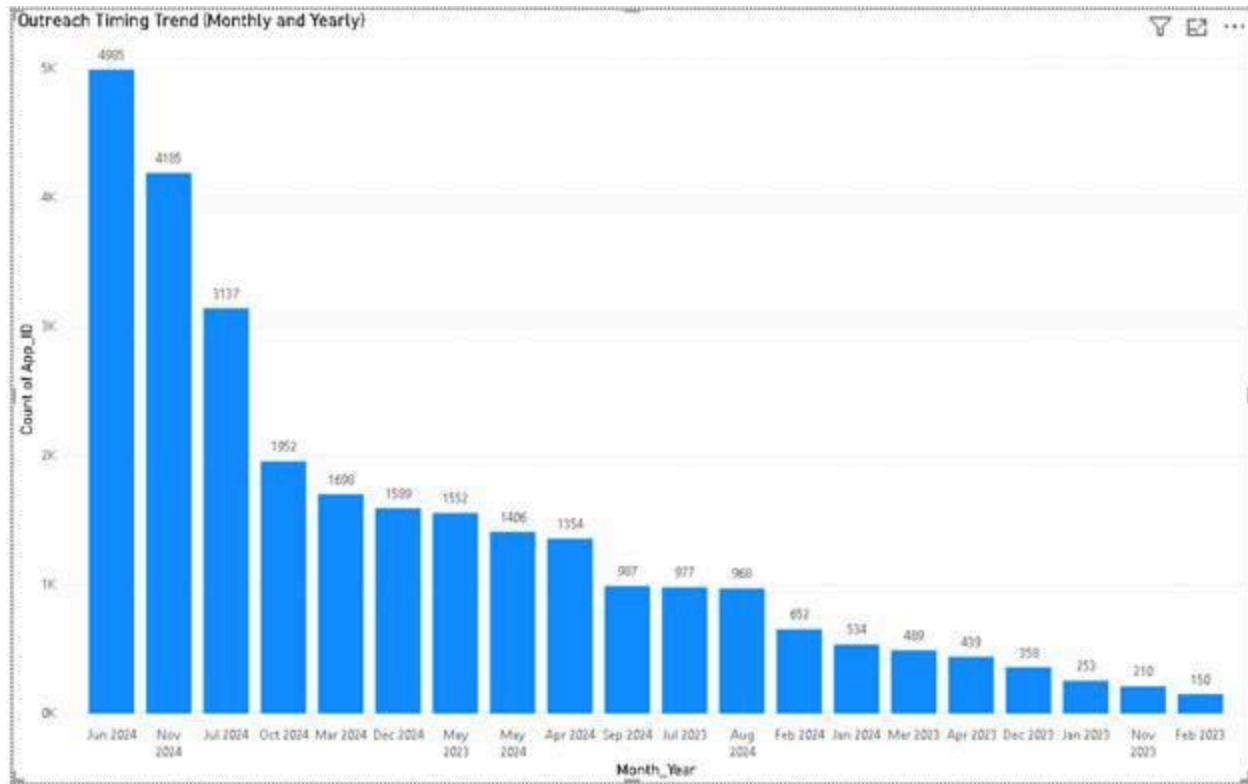
3. Campaign Category Performance



4. Outcome Effectiveness



5. Outreach Timing Trend (Monthly and Yearly)



Summary of Findings

- Outreach activity increased steadily and peaked in mid-year months.
- Most outreach attempts were unreachable, showing room for improvement in timing or method.
- India and Nigeria have the highest engagement rates — focus efforts there.
- Post-Admission campaigns dominate but have limited conversion impact.
- Outreach activity is seasonal, highest in June–July and November.

KEY PERFORMANCE INDICATORS

| KPI Name | Definition / Formula | Reason for Selection |
|----------------------------------|--|--|
| Outreach Volume | Total outreach attempts (COUNTROWS) | Measures overall campaign effort and consistency. |
| Response Rate (%) | Positive Responses / Total Outreach × 100 | Tracks engagement success rate of outreach efforts. |
| Conversion Rate (%) | Conversion Responses / Total Outreach × 100 | Measures how many outreach attempts lead to application or enrollment. |
| Attempt Effectiveness (%) | Positive Responses / Unreachable × 100 | Evaluates how efficiently contact attempts turn into successful responses. |
| Engagement by Segment (%) | Positive Responses per Country / Total per Country × 100 | Highlights high-performing regions or categories for targeted investment. |

MATCH VISUAL TO STAKE HOLDER NEEDS

| Stakeholder Question | Related Visual | Insight / Opportunity Identified |
|--|--|---|
| Which patterns reveal opportunities to improve enrollment? | Outcome Effectiveness (Donut Chart) | High “Unreachable” rate → adjust timing/method. |
| Which audience segments respond better? | Response Type by Country (Stacked Bar) | India & Nigeria are top-performing segments. |

| | | |
|---|--|---|
| Which contact strategies should Excelerate invest in? | Campaign Category Performance (Stacked Column) | Pre-Admission campaigns show more potential for conversion. |
| Can the dashboard answer key questions at a glance? | All visuals combined | Yes – visuals show activity, outcomes, and timing clearly. |

MAP BUSINESS GOALS TO KPIs

Excelerate aims to **improve enrollment outcomes by at least 15%** through optimized outreach performance.

| Business Focus Area | KPI(s) | Link to 15% Goal | What Excelerate Can Influence |
|----------------------------------|--|---|---|
| Increase successful contact rate | Response Rate (%), Attempt Effectiveness (%) | Improving contact success directly expands enrollment potential. | Optimize timing and contact methods. |
| Improve conversion efficiency | Conversion Rate (%) | Higher conversion means more enrolled students → direct 15% impact. | Improve follow-ups and nurture leads. |
| Enhance campaign effectiveness | Outreach Volume, Conversion Rate (%) | Identifies which campaigns convert best. | Focus resources on high-performing campaigns. |
| Target high-engagement segments | Engagement by Segment (%) | Boosts success by focusing on high-response regions. | Prioritize India, Nigeria, etc. |
| Optimize timing for outreach | (From Timing Trend Visual) | Aligns campaigns with high-response months. | Plan future campaigns during June–Nov. |

CALCULATED METRICS

| Metric Name | Actual Value / Result | Insight / Interpretation |
|---------------------------|---|--|
| Total Outreach | 27 ,880 (≈ 27.88 K) | Total outreach attempts across all campaigns — represents Excelerate’s communication scale. |
| Positive Responses | 1 ,083 | Total engaged contacts (“Connected”, “Completed application”, “Ready to pay”, etc.). |
| Conversion Responses | 868 | Students who progressed to the application / enrollment stage after outreach. |
| Conversion Rate (%) | 3.11 % | Only 3.11 % of total outreach attempts resulted in conversions → current efficiency baseline. |
| Response Rate (%) | ≈ 3.88 % ($1083 / 27880 \times 100$) | Engagement level across campaigns → measures how many contacts responded positively. |
| Attempt Effectiveness (%) | (<i>Bar Chart – Descending Order</i>) Top Countries: Turkmenistan, Argentina, Zambia, Kazakhstan, Canada, South Africa, Colombia, Côte d’Ivoire, India, etc. | Indicates efficiency of outreach in generating positive responses. Turkmenistan and Argentina lead, others decrease in order. |
| Engagement by Segment (%) | (<i>Bar Chart by Country / Region</i>) Top Engaged Regions: Argentina, Turkmenistan, Colombia | Shows share of positive responses within each region. Argentina and Turkmenistan show the highest overall engagement volumes, confirming them as key target markets. |

1. Country-wise Outreach Summary Table

| Country | Total Outreach | Count of Outcome_1 | Connected Count | Not Connected Count | Positive Responses | Response Rate % |
|---------------|----------------|--------------------------|-----------------|---------------------|--------------------|-----------------|
| Kazakhstan | 22 | Completed application | | 11 | 7 | 31.82 |
| Italy | 42 | Completed application | | 26 | 10 | 23.81 |
| South Africa | 490 | Already paid the deposit | | 247 | 111 | 22.65 |
| Kenya | 238 | Disconnected | | 126 | 53 | 22.27 |
| Zambia | 39 | Completed application | | 23 | 8 | 20.51 |
| Nigeria | 3375 | Completed application | 1 | 2157 | 679 | 20.12 |
| Ghana | 4011 | Already paid the deposit | | 2429 | 758 | 18.90 |
| Liberia | 42 | Completed application | | 22 | 7 | 16.67 |
| Uganda | 98 | Completed application | | 67 | 16 | 16.33 |
| Sierra Leone | 69 | Disconnected | | 38 | 11 | 15.94 |
| Vietnam | 27 | Completed application | | 15 | 4 | 14.81 |
| Zimbabwe | 215 | Disconnected | | 153 | 30 | 13.95 |
| Cote D'Ivoire | 15 | Completed application | | 11 | 2 | 13.33 |
| Malawi | 39 | Disconnected | | 22 | 5 | 12.82 |
| Ethiopia | 383 | Already Enrolled | | 235 | 48 | 12.53 |
| Bangladesh | 939 | Already paid the deposit | | 644 | 113 | 12.03 |
| Tanzania | 60 | Disconnected | | 40 | 7 | 11.67 |
| Nepal | 803 | Completed application | | 630 | 92 | 11.46 |
| Pakistan | 1490 | Already paid the deposit | | 1120 | 153 | 10.27 |
| India | 12598 | Already Enrolled | | 8668 | 1289 | 10.23 |
| Gambia | 115 | Completed application | | 56 | 9 | 7.83 |
| Iran | 1262 | Already Enrolled | | 948 | 92 | 7.29 |
| Egypt | 42 | Completed application | | 30 | 3 | 7.14 |
| Afghanistan | 57 | Completed application | | 38 | 4 | 7.02 |
| Turkey | 45 | Disconnected | | 35 | 3 | 6.67 |
| Sri Lanka | 36 | Disconnected | | 21 | 2 | 5.56 |
| Myanmar | 20 | Disconnected | | 17 | 1 | 5.00 |
| Philippines | 24 | Disconnected | | 17 | 1 | 4.17 |
| China | 84 | Completed application | | 59 | 3 | 3.57 |
| South Korea | 57 | Already Enrolled | | 44 | 2 | 3.51 |
| Azerbaijan | 33 | Disconnected | | 25 | 1 | 3.03 |

| | | | | | | |
|--------------|--------------|-------------------------|----------|--------------|-------------|--------------|
| Saudi Arabia | 74 | Completed application | | 39 | 2 | 2.70 |
| Cameroon | 40 | Disconnected | | 20 | 1 | 2.50 |
| Jordan | 43 | Disconnected | | 27 | 1 | 2.33 |
| Brazil | 44 | Disconnected | | 39 | 1 | 2.27 |
| Taiwan | 132 | Completed application | | 100 | 3 | 2.27 |
| Spain | 99 | Already Enrolled | | 35 | 1 | 1.01 |
| Botswana | 41 | Disconnected | | 28 | | |
| Colombia | 19 | Disconnected | | 16 | | |
| France | 46 | Disconnected | | 24 | | |
| Mexico | 16 | Disconnected | | 12 | | |
| Rwanda | 58 | Disconnected | | 43 | | |
| Somalia | 104 | Disconnected | | 93 | | |
| Total | 27486 | Already Enrolled | 1 | 18450 | 3533 | 12.85 |

2. Campaign Category Performance Table

| Category | Count of App_ID | First Outcome_1 | Positive Responses | Not Connected Count | Positive % |
|----------------|-----------------|-------------------------|--------------------|---------------------|--------------|
| Post Admission | 21385 | Already Enrolled | 3021 | 14140 | 14.12672 |
| Pre Admission | 6490 | Already Enrolled | 540 | 4501 | 8.320493 |
| Total | 27875 | Already Enrolled | 3561 | 18641 | 12.77 |

3. Outcome Breakdown Table

| Outcome_1 | Count of Outcome_1 | Outcome Percentage |
|---|--------------------|--------------------|
| Already Enrolled | 11 | 0.04 |
| Already paid the deposit | 72 | 0.26 |
| Application already started | 1 | 0.00 |
| Application already stated | 1 | 0.00 |
| Appointment scheduled-VISA status pending | 6 | 0.02 |
| Completed application | 474 | 1.70 |
| Connected | 1 | 0.00 |
| Disconnected | 1173 | 4.21 |
| Duplicate app | 55 | 0.20 |
| i20 Sent-i901 payment pending | 1 | 0.00 |
| I901 paid- Appointment Scheduled | 8 | 0.03 |
| I901 paid- Visa appointment not Scheduled | 5 | 0.02 |
| I901 paid- Visa Denied | 4 | 0.01 |

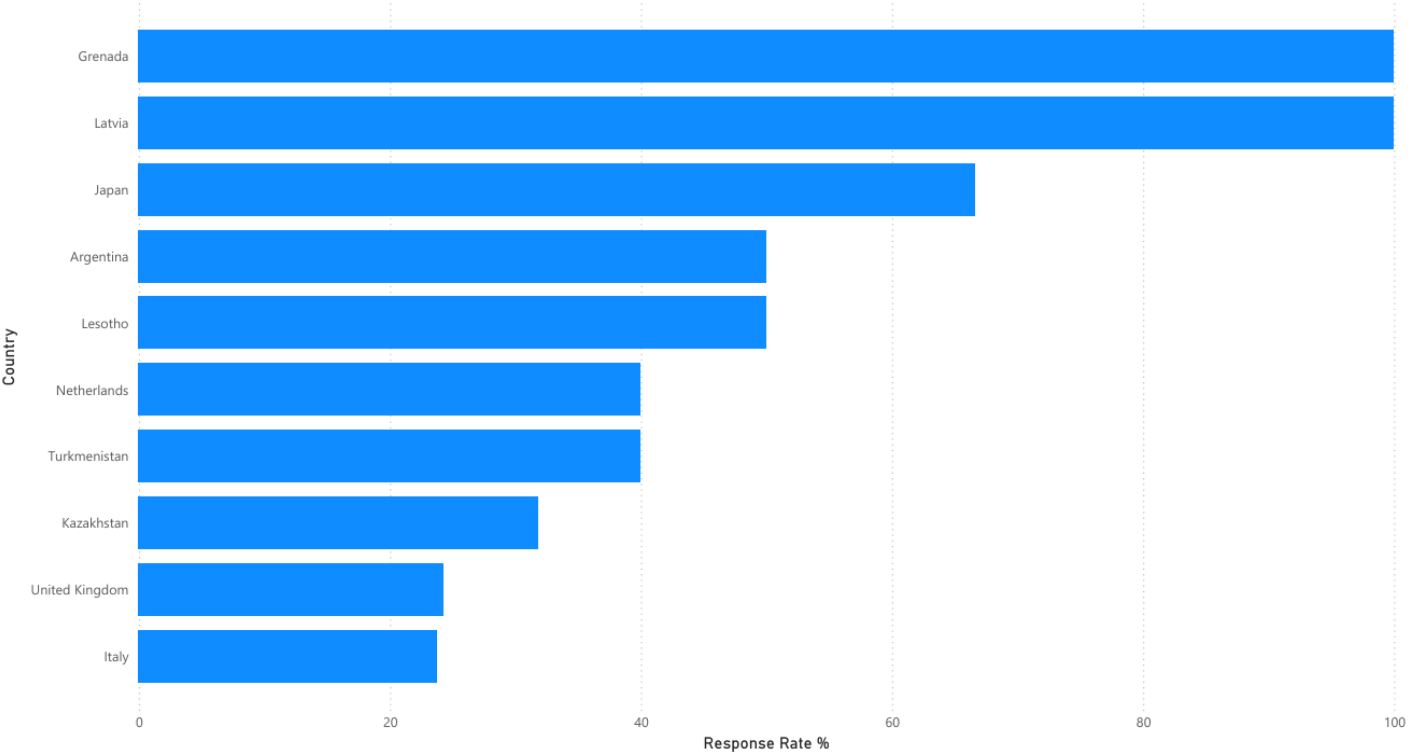
| | | |
|---|--------------|---------------|
| I901 paid- Waiting for slot | 10 | 0.04 |
| Looking to defer admission to a future term (SP25 or FA25) | 39 | 0.14 |
| Not connected | 18641 | 66.87 |
| Not interested | 154 | 0.55 |
| Not interested to IIT | 726 | 2.60 |
| Not interested to Pay | 9 | 0.03 |
| Ready to pay the deposit | 311 | 1.12 |
| Reschedule | 310 | 1.11 |
| Still making a decision | 80 | 0.29 |
| Student has decided that they are no longer interested in Illinois Tech and will forfeit the deposit | 11 | 0.04 |
| Student has the needed information, does not need assistance, and plans to enroll soon | 317 | 1.14 |
| Student is experiencing issues with the registration process/portal | 17 | 0.06 |
| Student is having trouble contacting their academic advisor and needs assistance | 49 | 0.18 |
| Student is interested in deferring to Fall 2025 (August) | 55 | 0.20 |
| Student is interested in deferring to Spring 2025 (January) | 30 | 0.11 |
| Student is looking to defer to the SP25 or FA25 term | 18 | 0.06 |
| Student will join SP25 session | 197 | 0.71 |
| Student will not be attending Illinois Tech and needs to be withdrawn | 29 | 0.10 |
| Student's VISA was denied, they aren't interested in a deferral, and they would like a refund of the enrollment deposit | 24 | 0.09 |
| VISA approved- Travel details required | 17 | 0.06 |
| VISA denied- Defer to next term | 12 | 0.04 |
| Voicemail | 215 | 0.77 |
| Want to defer | 205 | 0.74 |
| Will confirm later | 346 | 1.24 |
| Will start application soon | 91 | 0.33 |
| Will Submit the docx | 3086 | 11.07 |
| Will work on providing documents soon, still interested in FA24 | 50 | 0.18 |
| Wrong number | 1014 | 3.64 |
| Total | 27875 | 100.00 |

4. Monthly Outreach Summary Table

| Month | Count of App_ID | Positive Responses |
|--------------|-----------------|--------------------|
| 2023-01 | 253 | 59 |
| 2023-02 | 150 | 43 |
| 2023-03 | 489 | 114 |
| 2023-04 | 439 | 60 |
| 2023-05 | 1552 | 215 |
| 2023-07 | 977 | 1 |
| 2023-11 | 210 | 91 |
| 2023-12 | 358 | 89 |
| 2024-01 | 534 | 96 |
| 2024-02 | 652 | 76 |
| 2024-03 | 1698 | 254 |
| 2024-04 | 1354 | 158 |
| 2024-05 | 1406 | 165 |
| 2024-06 | 4985 | 950 |
| 2024-07 | 3137 | 195 |
| 2024-08 | 968 | 76 |
| 2024-09 | 987 | 92 |
| 2024-10 | 1952 | 364 |
| 2024-11 | 4185 | 378 |
| 2024-12 | 1589 | 85 |
| Total | 27875 | 3561 |

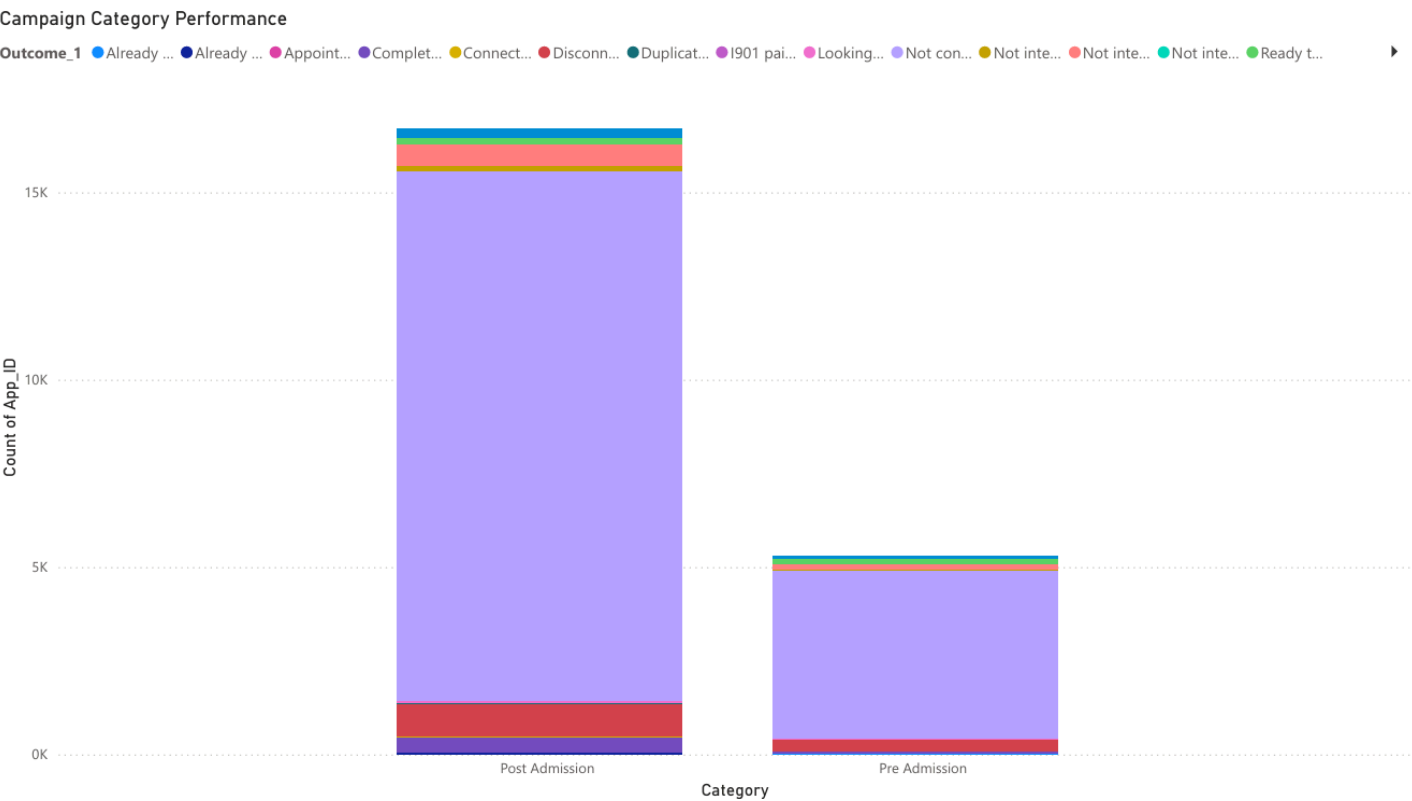
Top 10 Countries by Response Rate

Top 10 Countries by Response Rate



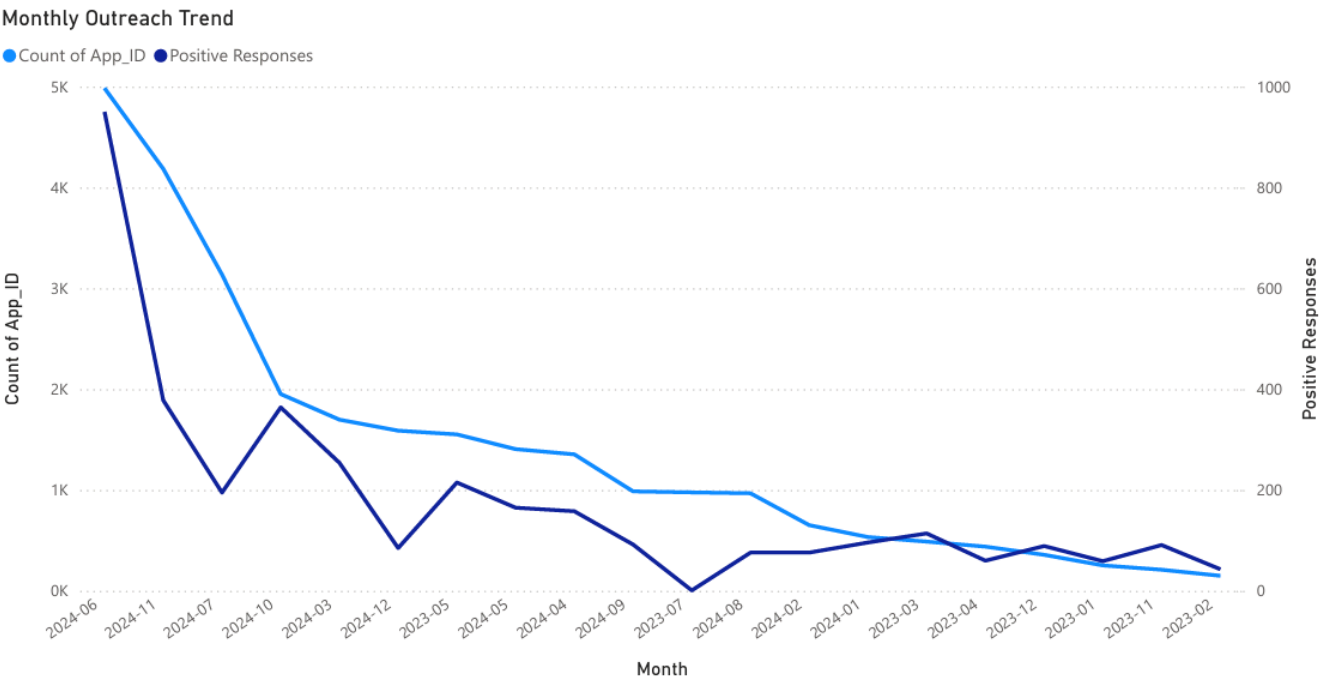
This visual displays the **top 10 countries ranked by their Response Rate (%)**. It highlights the regions where outreach efforts performed best, enabling comparison of engagement levels across countries.

Campaign Category Performance



This **stacked column chart** shows the distribution of **Connected** and **Not Connected** outcomes across different campaign categories. It helps identify which campaign categories generate stronger engagement and which ones need improvement.

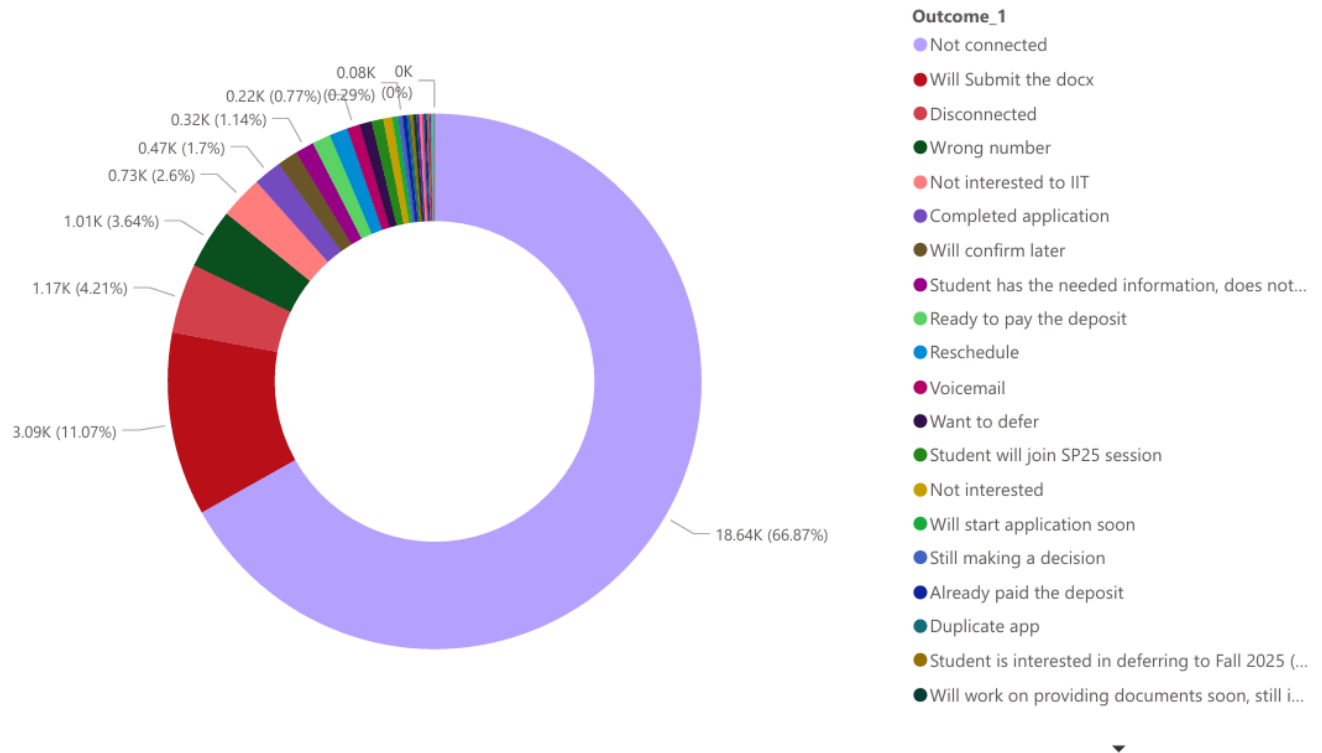
Monthly Outreach Trend



This **line chart** illustrates the **month-wise** outreach activity, showing how many **applications (App_IDs)** were recorded each month. The trend helps monitor seasonal patterns, growth, dips, and overall outreach progress over time. If positive responses are added as a secondary line, it also shows how **engagement changes month-to-month**.

Outcome Breakdown

Count of Outcome_1 by Outcome_1



This **donut chart** displays the overall distribution of outreach outcomes, showing how many entries fall under each **Outcome_1 category**. It provides a quick, visual understanding of which outcomes dominate—such as **Connected, Not Connected, or other response types**.

RECOMMENDATION:

Key Highlights

- **Geographic Focus:** Kazakhstan, Italy, and South Africa show exceptional response rates (31.82%, 23.81%, 22.65%) despite smaller volumes. These markets deserve increased investment.
- **Campaign Strategy:** Post-admission campaigns significantly outperform pre-admission ones (14.13% vs 8.32% positive response rate), suggesting a strategic shift in timing.
- **Connection Challenge:** With 66.87% "Not connected" outcomes, improving contact strategies is critical for success.
- **High-Volume Opportunities:** Nigeria and Ghana represent massive potential with large volumes but room for response rate improvement.
- **Seasonal Patterns:** June 2024 showed peak performance with 4,985 outreach attempts and 950 positive responses, indicating optimal timing strategies.

The recommendations include specific action plans for geographic targeting, campaign optimization, connection improvement strategies, resource allocation, and performance monitoring systems. Each recommendation is backed by data insights from your analysis and includes measurable success metrics.