

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.

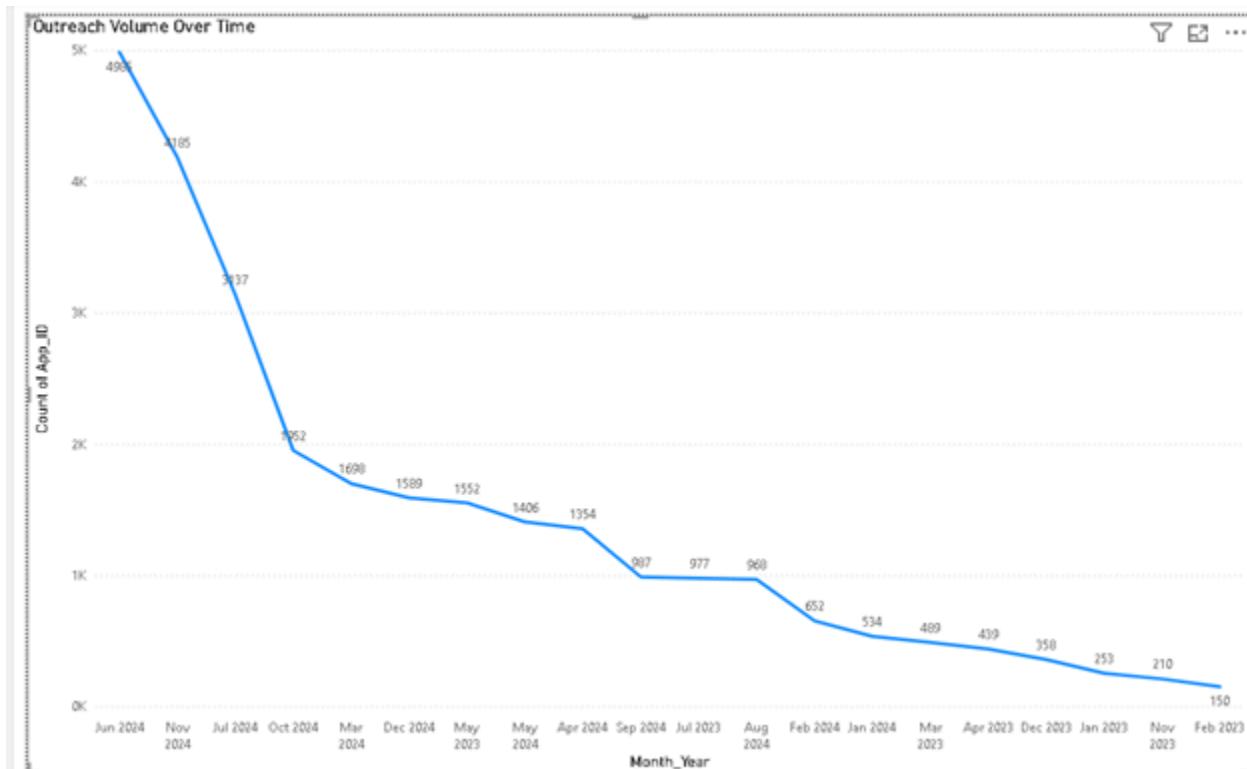
- Campaign category performance.
- Top countries by response rate.
- Engagement trends and seasonal patterns

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

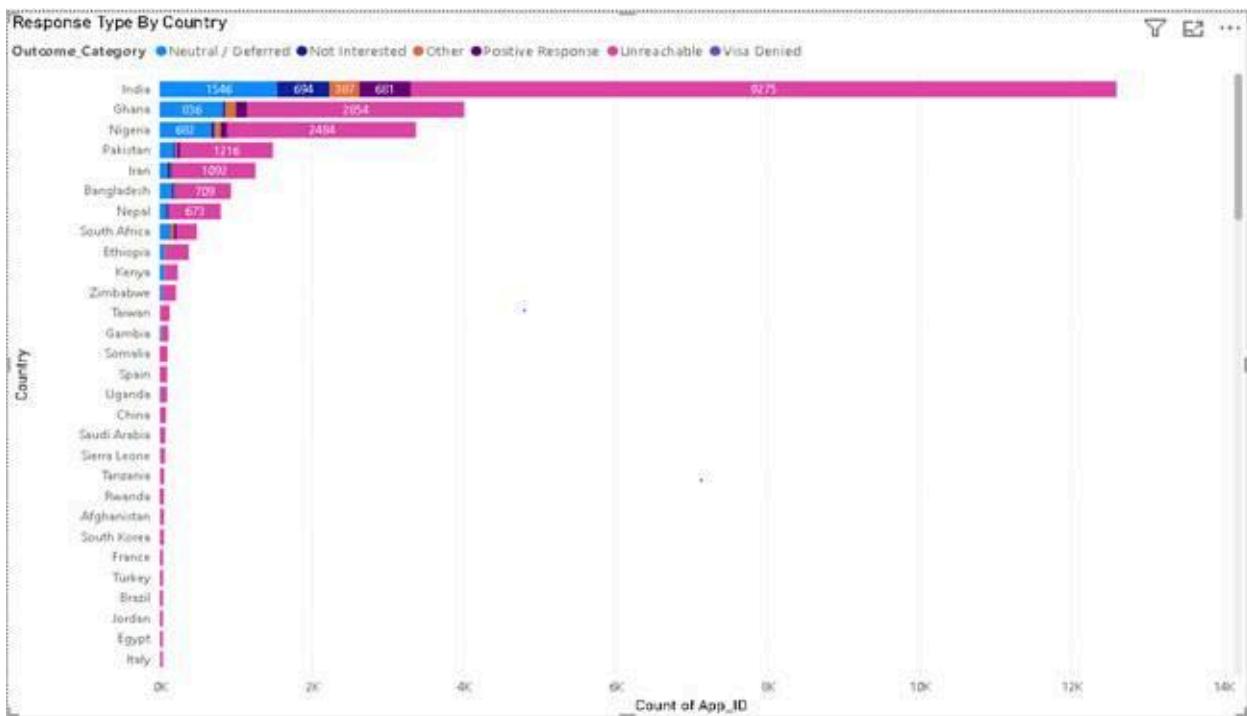
Campaign Category Performance	Stacked Column Chart	"Post Admission" campaigns dominated outreach volume but had the highest proportion of unreachable outcomes. Smaller campaigns (like Pre Admission) showed slightly better engagement.	Power BI
Outcome Effectiveness	Donut Chart	Most outreach attempts resulted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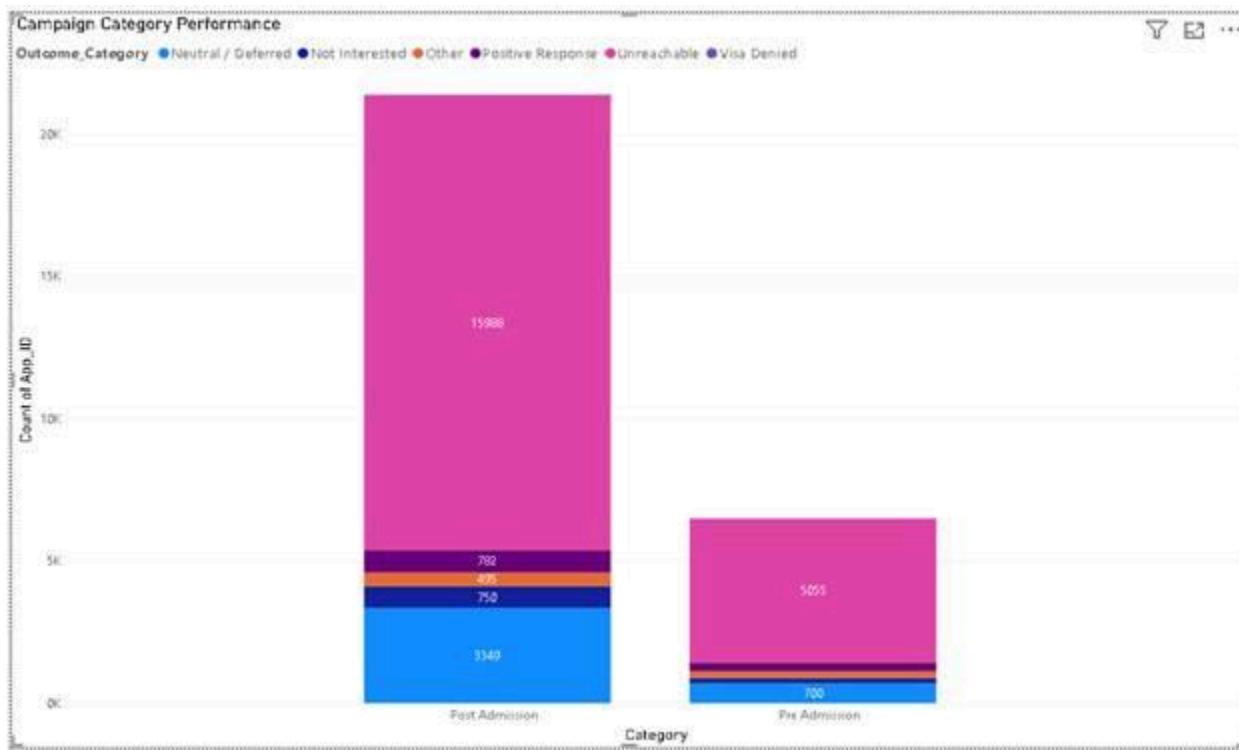
1. Outreach Volume Over Time



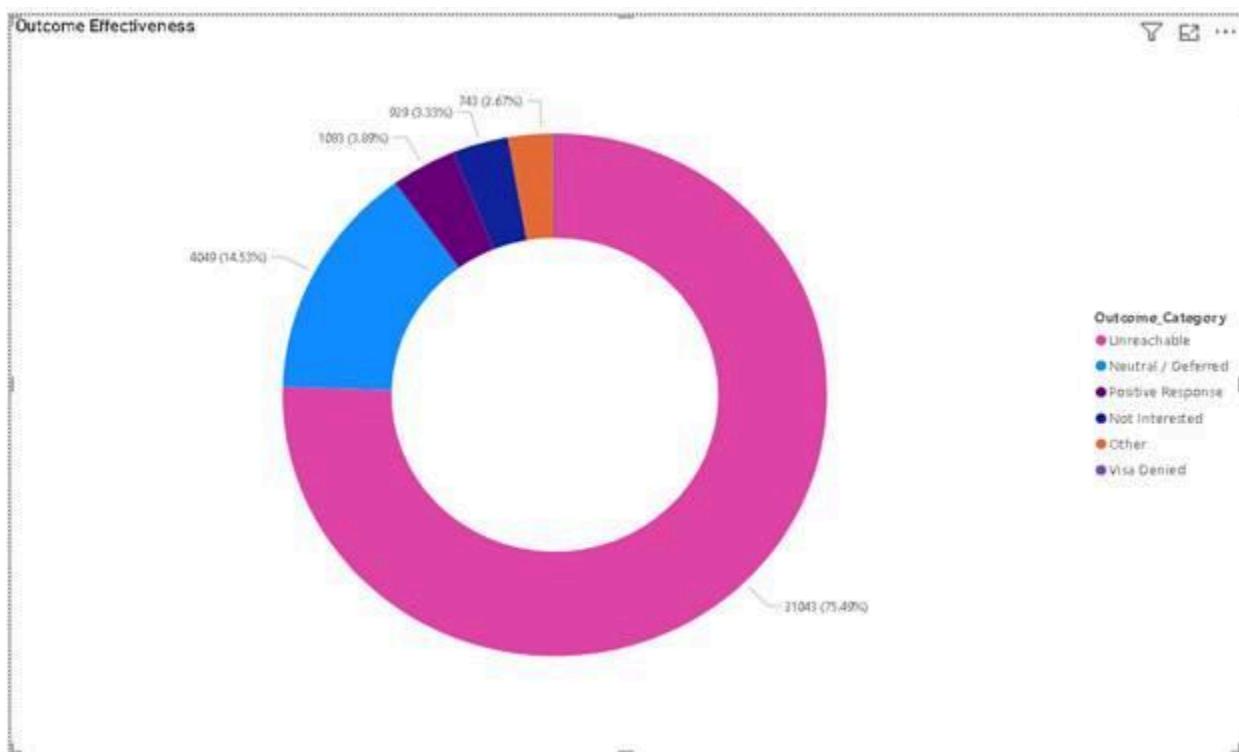
2. Response Type by Country



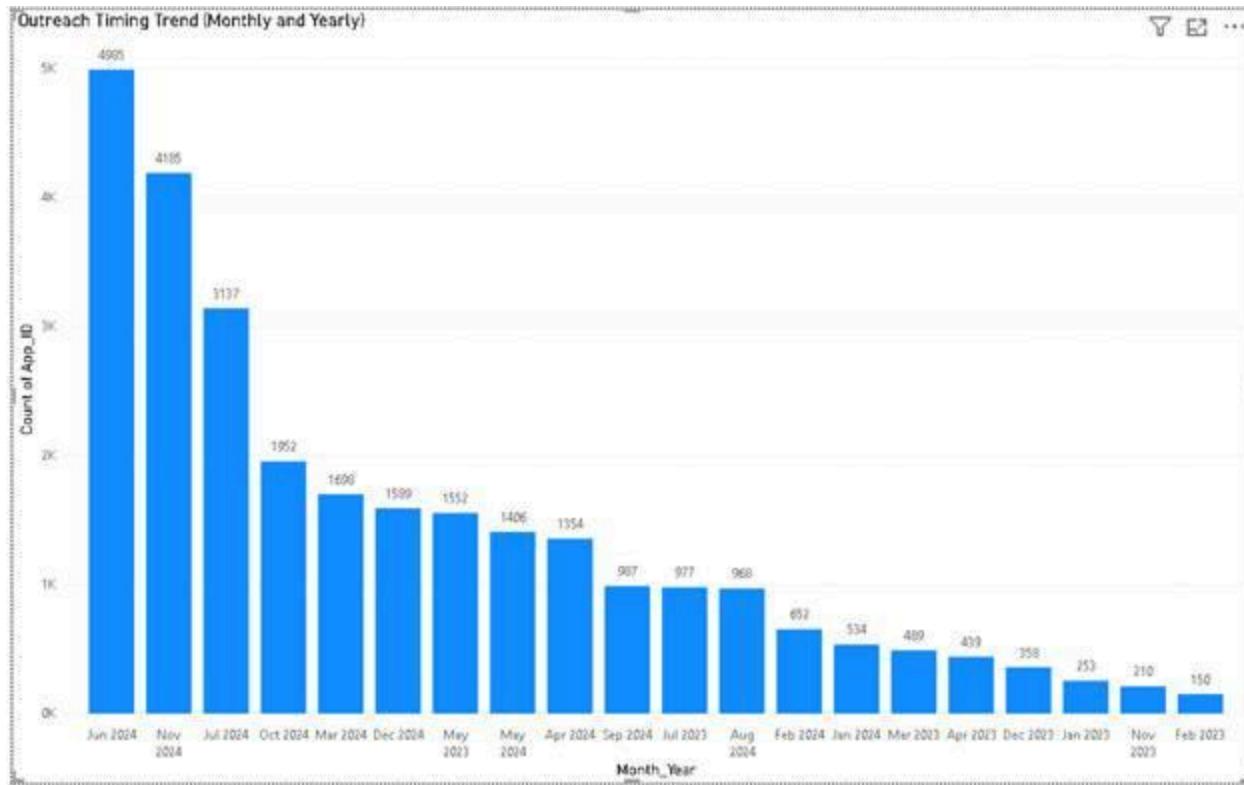
3. Campaign Category Performance



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 $\times 100$	Tracks engagement success rate of outreach efforts.
Conversion Rate (%)	Conversion Responses / Total Outreach $\times 100$	Measures how many outreach attempts lead to application or enrollment.
Attempt Effectiveness (%)	Positive Responses / Unreachable $\times 100$	Evaluates how efficiently contact attempts turn into successful responses.
Engagement by Segment (%)	Positive Responses per Country / Total per Country $\times 100$	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 (%)	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	$\approx 3.88\%$ ($1083 / 27880 \times 100$) (%)	Engagement level across campaigns → measures how many contacts responded positively.
Attempt Effectiveness (%)	(Bar Chart – Descending Order) 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 (%)	(Bar Chart by Country / Region) 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
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
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
Tanzania	60	Disconnected		40	7	11.67
Nepal	803	Completed application		630	92	11.46
Pakistan	1490	Already paid the deposit			1120	153
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

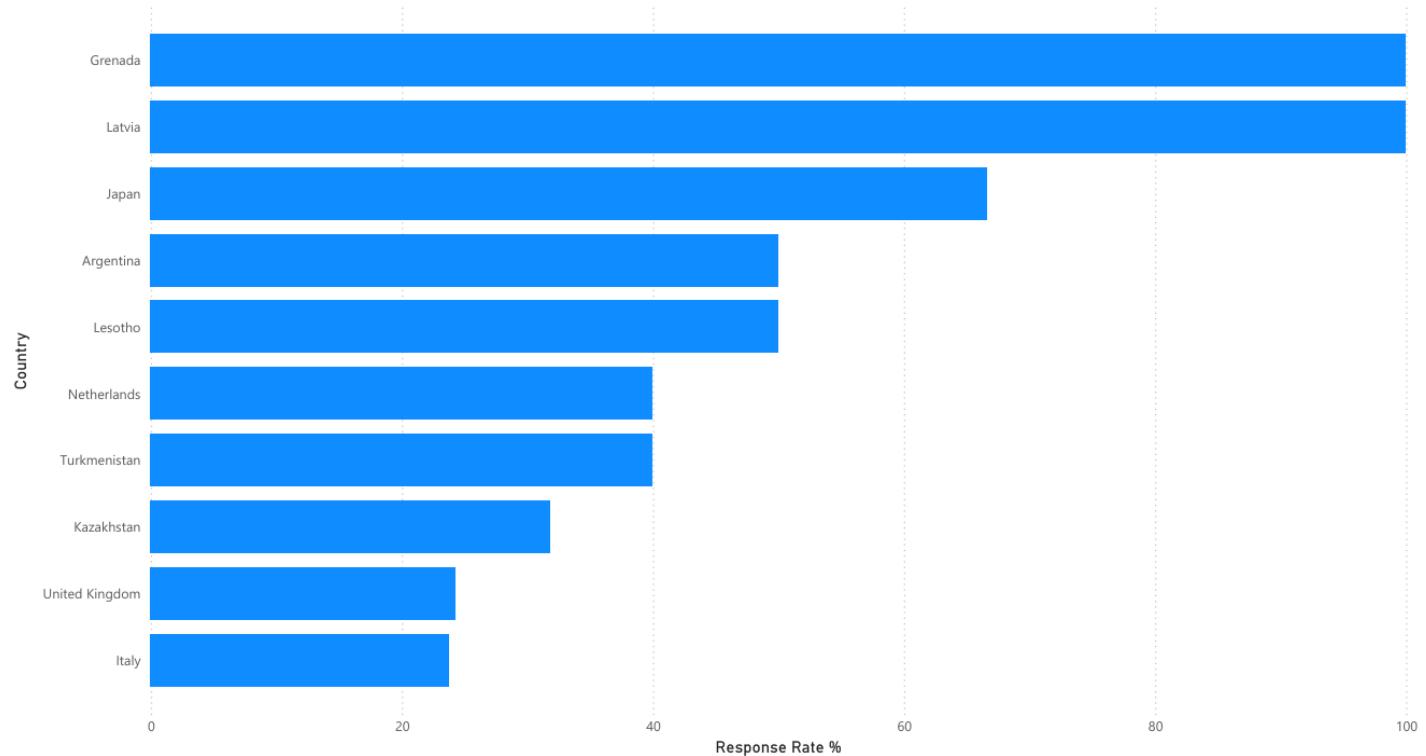
I901 paid- Waiting for slot	10	0.04
Looking to defer admission to a future term (SP25 or FA25)	39	0.14
Not connected	18641	66.87
Not interested	154	0.55
Not interested to IIT	726	2.60
Not interested to Pay	9	0.03
Ready to pay the deposit	311	1.12
Reschedule	310	1.11
Still making a decision	80	0.29
Student 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

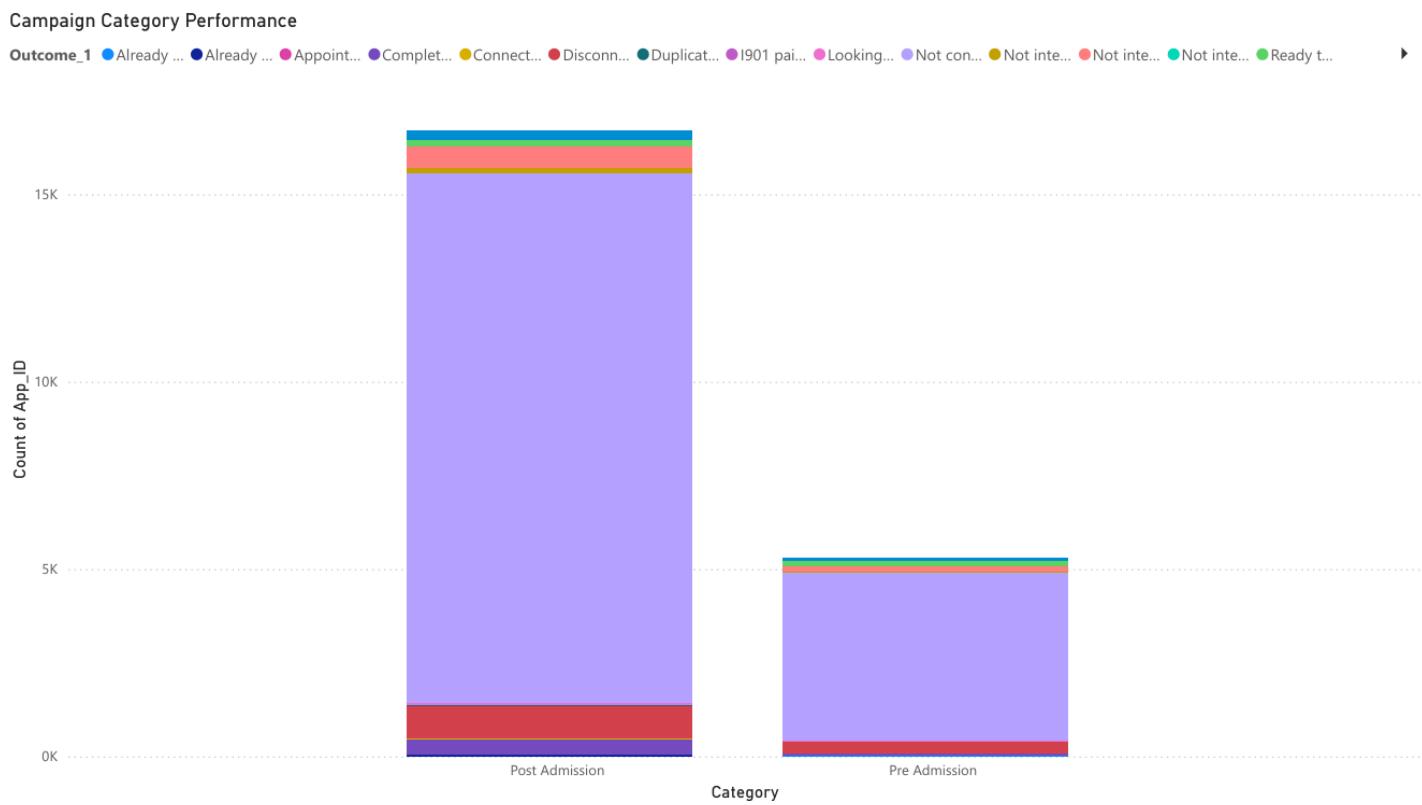
Top 10 Countries by Response Rate

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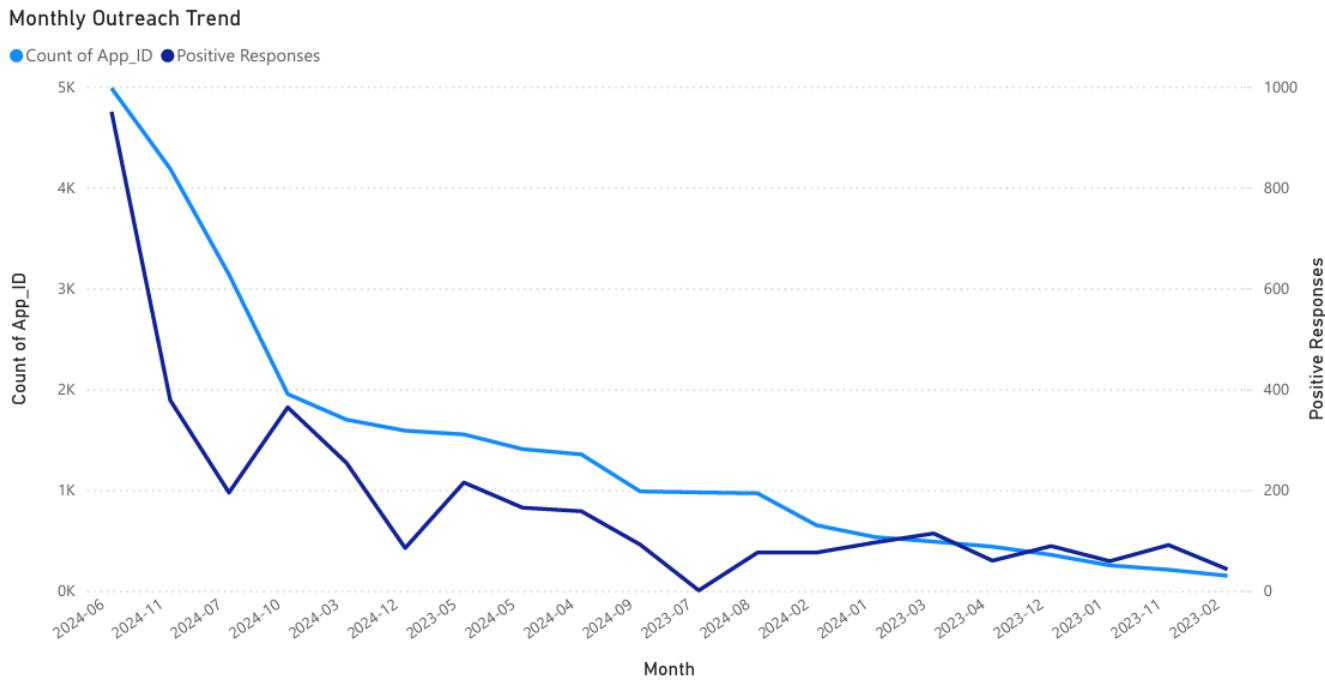
This visual displays the **top 10 countries ranked by their Response Rate (%)**. It highlights the regions where outreach efforts performed best, enabling comparison of engagement levels across countries.

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.

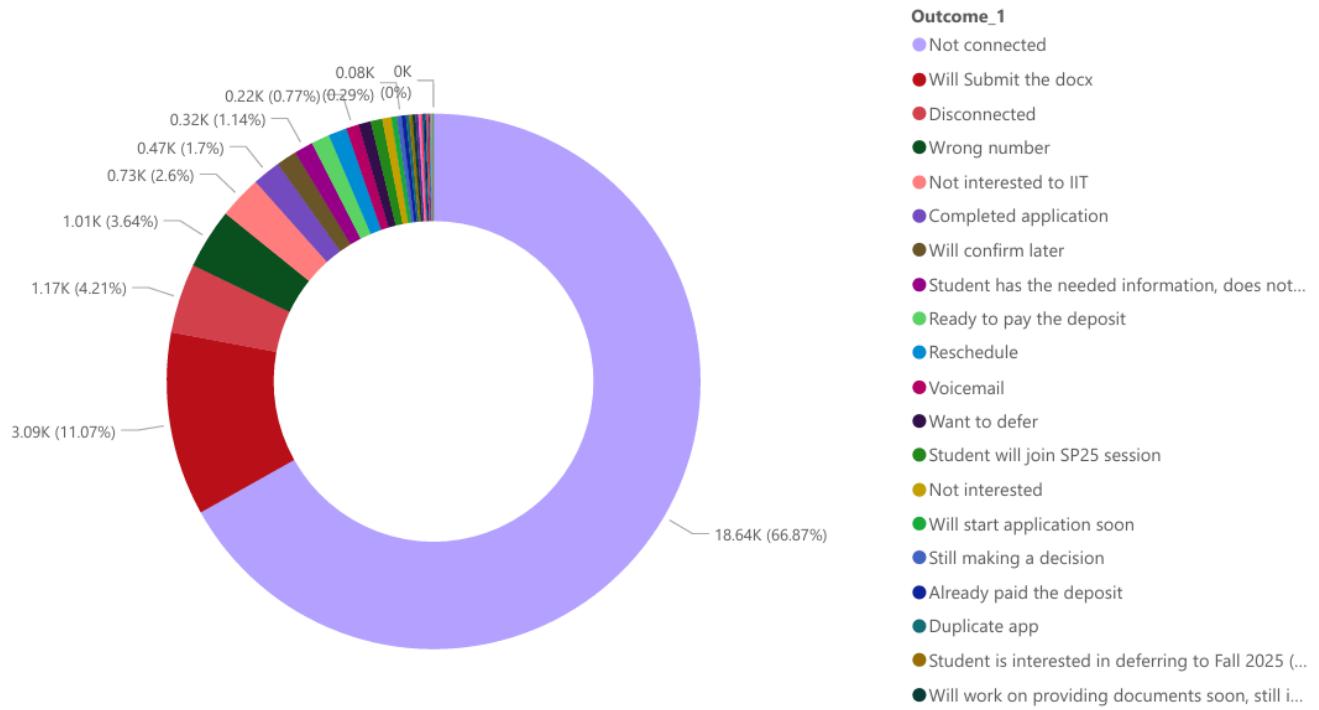
Monthly Outreach Trend



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.