OPTIMISING DONOR ASK STRATEGIES IN BOUNCEBACK FOR LONG-TERM IMPACT

Group 42

Introduction

Background

World Vision Australia (WVA)’s Bounceback Campaign plays a vital role in strengthening the bond between supporters and their sponsored children by encouraging meaningful engagement beyond regular monthly giving.

~175,000

~230,000

~442M

Goal: deepen emotional connections and improve the donor experience

Dollar Handle Calculations

We calculate the amount of money to ask supporters to donate by looking at their past donations.

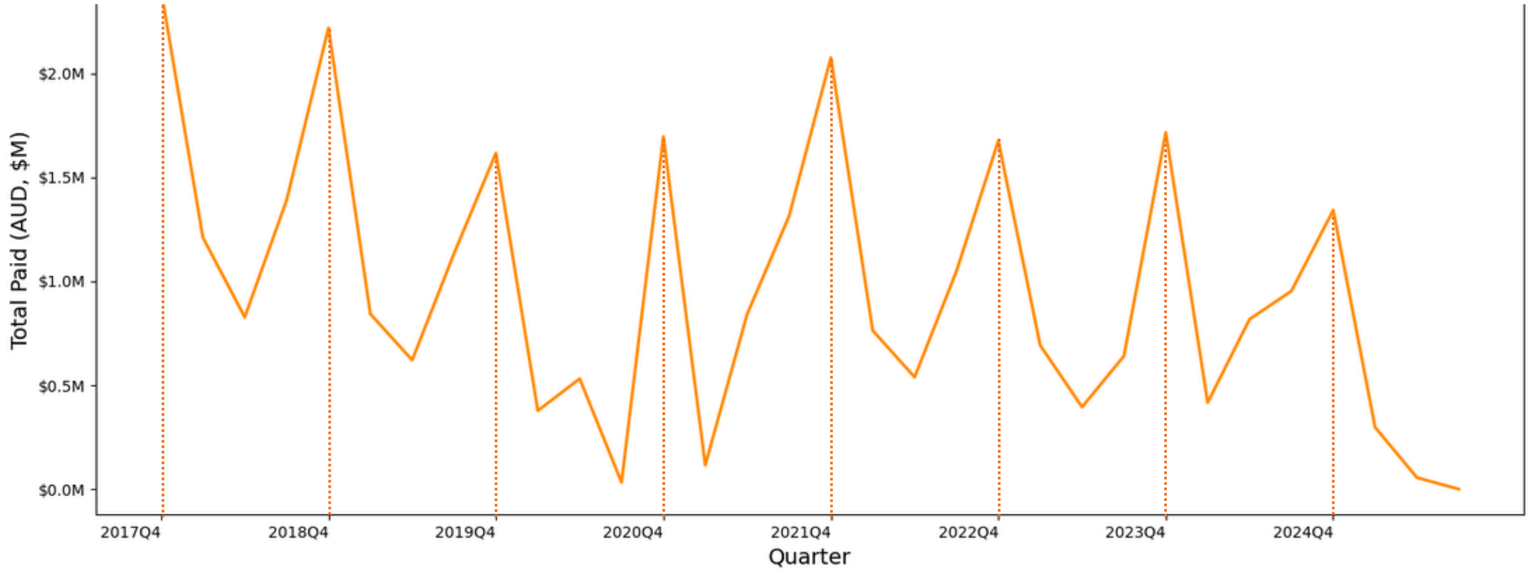
Segments	Definitions	Dollar Handles	Ask A	Ask B	Ask C
A. Responded Supporters	CSPON supporters who have historically responded to any Bounceback	$0-$10.00	$20	$35	$45
		$10.01 - $50.00	$50	$75	$100
		$50.01 - $100.00	x1.25 rounded up to nearest $5	x1.5 rounded up to nearest $5	x2 rounded up to nearest $5
		$100.01 - $200.00	x1.25 rounded up to nearest $10	x1.5 rounded up to nearest $10	x2 rounded up to nearest $10
		$200.01+	x1.25 rounded up to nearest $50	x1.5 rounded up to nearest $50	x2 rounded up to nearest $50
B. Not Responded Supporters	CSPON supporters who have never responded to any Bounceback	ALL	$20	$35	$45
C. New Supporters	Supporters who are new to World Vision				

Problem Statement

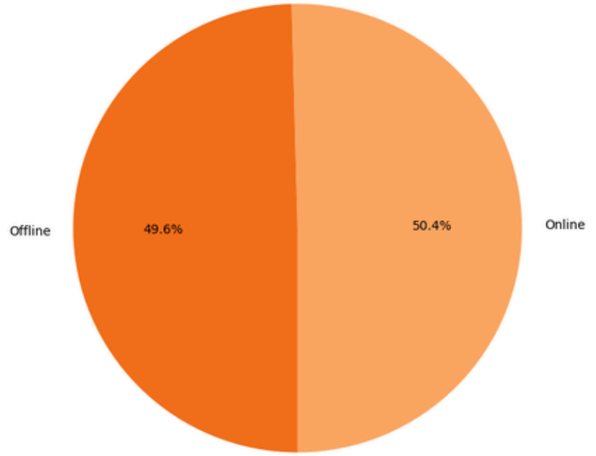
How might WVA **segment** its donors and **personalise ask** amounts in the Bounce-back campaign to maintain *ongoing donations*, minimise *communication fatigue*, and lower the *risk of disengagement*?

Key Supporter Insights

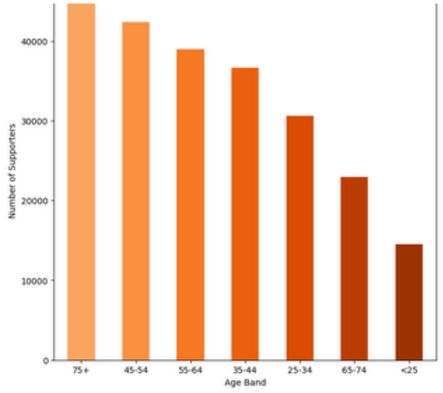
Quarterly Giving Patterns



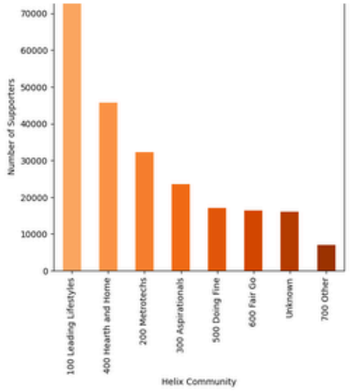
Bounceback Stream (%)



Supporters by Age Band

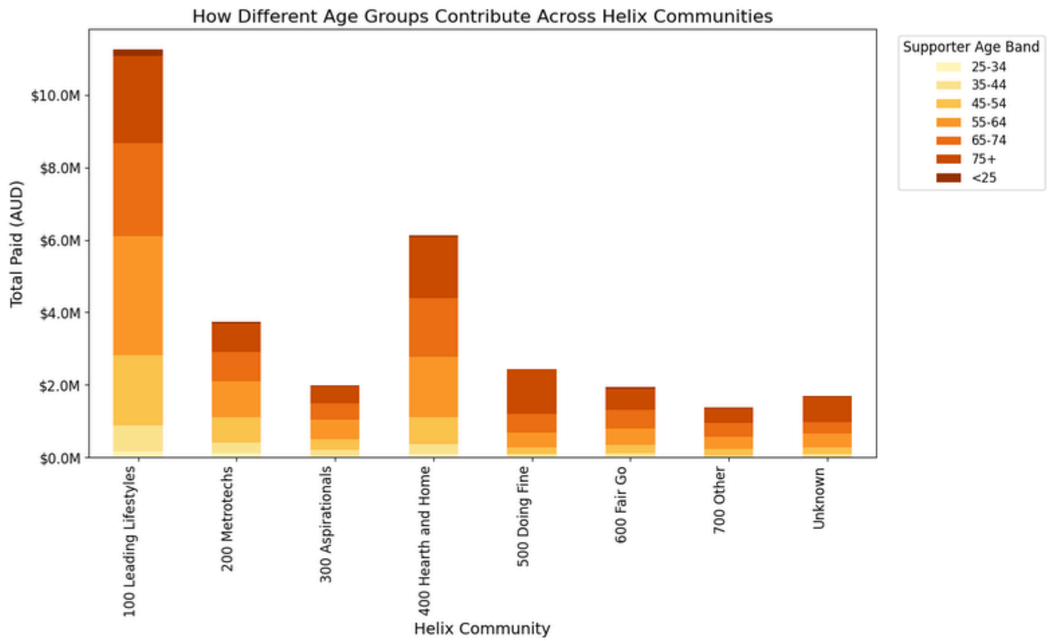


Supporters by Helix Community

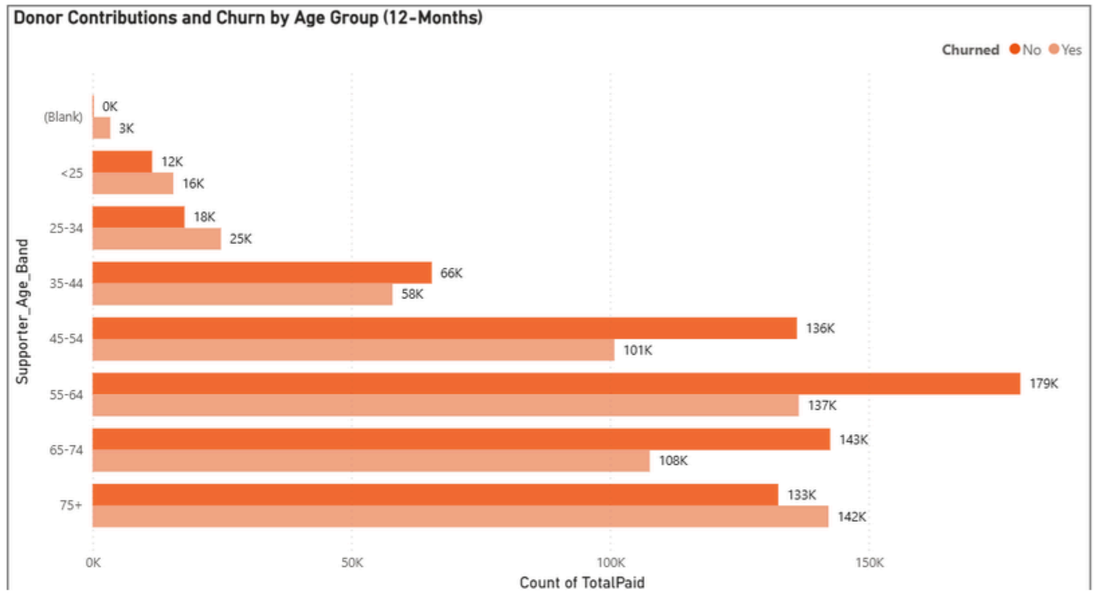


Supporter & Campaign Performance

Contributions by Age Across Helix Communities



Donor Contributions & Churn by Age Group



Donations by Bounceback (FY)

Fiscal Year	Bounceback Type		
	Birthday	Christmas	Education
2023	50,056	55,002	37,897
2024	51,522	53,268	32,268
2025	13,096	39,549	-

Avg Response Time (days) by Bounceback

Fiscal Year	Bounceback Type		
	Birthday	Christmas	Education
2023	~24	~19	~31
2024	~19	~38	~25
2025	~12	~19	-

Our Integrated Solution

Determining ask band based on classification model - Random Forest

Personalisation of donation ask through multiple regression model and past donation information

Strategic business implementation of proposed solution

Proposed segmentation and ask personalisation

For a birthday campaign

Segmentation	Definition	Ask A	Ask B	Ask C
High capacity	High Frequency (7-10) Measure (> $100) Personalised Ask	Predicted Ask x 0.8	Predicted Ask x 1	Predicted Ask x 1.3
Mid capacity	Measure $60.1-100 Age > 45	$55	$70	$90
Growth potential	Measure $30.1-60 Age < 45	$30	$40	$50
New Supporters/Non-responders	Measure < $30 New and unengaged supporters	$15	$20	$25

Individualised ask example

Supporter_ID	Donation_Date	Total Paid	Campaign_Key	Frequency	Supporter_Tenure
154669	17-05-2024	550	1976	10	10
154669	27-03-2024	550	1957	9	10
154669	28-09-2024	400	1923	8	10
154669	14-03-2023	300	1907	7	9

Proposed Solution

Supporter 154669 next-gift prediction: 605

$500

Ask A

$600

Ask B

$800

Ask C

Current dollar handle calculation

Last donation amount x multiplier

$700

Ask A

$850

Ask B

$1,100

Ask C

Campaign Design Proposals

Campaign multipliers based on donor engagement

Christmas: 1.15 (highest engagement)
Birthday: 1
Education: 0.95 (lowest but consistent)

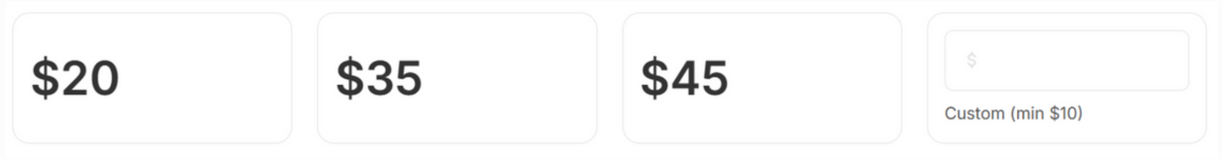
Realignment of communication expenditure

E-DM packs for younger donors
Cutting down on DM packs to non-engagers
Redirect cost saved to high-capacity donors

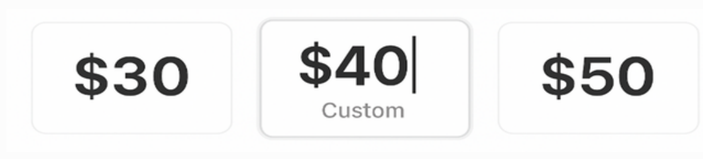
Open ask optimization for online donation

Ask B offered as an open ask as opposed to a separate box allotment
Psychologically sets a lower (Ask A) and upper limit (Ask C)

Current ask pattern



Proposed ask pattern



Conclusion

Key Insights

By implementing the proposed solution, we expect;

Drop in donor churn rate

Increase in overall revenue through ongoing donations

Recommendations

Better predictions can be developed using information, such as the past ask amount, the area code of supporters, etc

Further Sugesstion

Propensity scoring model for better segmentation

Thank You

Appendix

Metrics and KPIS

Metrics	Definition/Calculation	Target Setting
Retention rate	**No.of donors who gave last year and this year** / **No.of donors who gave last year**	Low threshold: ~ 0.7-0.8 Base threshold: > 0.80 High threshold: > 0.90
Average response time	**Donation received date - Closest preceding communication sent date**	Low threshold: ~ 20 days Base threshold: ~ 15 days High threshold: ≤10 days
Churn percentage (disengagement rate)	**LastDonationDate is ≥12 months. Churn %=Donors flagged Yes / total donor**	Low threshold: > 30% Base threshold: <25% High threshold : <20%

Yearly churn rate metrics calculation

Calculation - flags churn = gave in year Y but not in Y+1

Year	Total Revenue	Churned Donor %	Revenue loss for the next year
2020	$9,38,186.50	56.18%	$5,27,073.18
2021	$15,62,558.45	51.36%	$8,02,530.02
2022	$18,82,294.60	54.02%	$10,16,815.54
2023	$15,96,600.00	57.64%	$9,20,280.24
2024	$12,75,044.04	93.02%	$11,86,045.97

Also, please note 2024 shows 93% because it's comparing 2024 donors to 2025, and 2025 data is partial, so churn is inflated.

Prediction Calculations
The trend of churn rate increase for 2021–2023 is +3.14 percentage points per year.
Therefore, predicted churn %
2024 (pred.) = 57.64% + 3.14% ≈ 60.78%

Predicted "Revenue loss for the next year"
Revenue loss for 2025 : ≈ 1,275,044.04 × 0.6078 = $774,971.79
(≈ $774,972)

Year	Next_Year	Total_Supporters	Retained_Donors	Churned_Donors	Churn_Rate_%	Retention_Rate_%	Note
2017	2018	14546	6941.0	7605.0	52.28	47.72	
2018	2019	29249	11482.0	17767.0	60.74	39.26	
2019	2020	22216	6301.0	15915.0	71.64	28.36	
2020	2021	12462	5461.0	7001.0	56.18	43.82	
2021	2022	18007	8758.0	9249.0	51.36	48.64	
2022	2023	18330	8429.0	9901.0	54.02	45.98	
2023	2024	15570	6596.0	8974.0	57.64	42.36	
2024	2025	14907	1040.0	13867.0	93.02	6.98	
2025	2026	2609	NaN	NaN	NaN	NaN	Next year not in file; churn not measurable yet.

PS D:\python stuff\data>

Example of personalised ask for a high capacity doner

Supporter_ID	Donation_Date	Total Paid	Campaign_Key	Frequency	Supporter_Tenure
154669	17-05-2024	550	1976	10	10
154669	27-03-2024	550	1957	9	10
154669	28-09-2024	400	1923	8	10
154669	14-03-2023	300	1907	7	9

Proposed Solution

Multiple regression model with weights 0.6, 0.3, 0.1 on the last 3 gifts

Supporter 154669 next-gift prediction: 605

Ask A = 605*0.8 = $500

Ask B = 605*1 = $600

Ask C = 605*1.3 = $800

**All asks rounded to the nearest 50*

Current dollar handle calculation

Last donation amount x multiplier

(round up to nearest 50)

Ask A = 550*1.25 = $700

Ask B = 550*1.5 = $850

Ask C = 550*2 = $1,100

Independent variable correlation

```
Transaction-level Pearson r(TotalPaid, Donation_Count): 0.125
Transaction-level Spearman ρ(TotalPaid, Donation_Count): 0.224

Supporter-level correlations (Pearson / Spearman):
  total_amount  vs Donation_Count: 0.378 / 0.798
  avg_gift      vs Donation_Count: 0.156 / 0.392
  last_gift     vs Donation_Count: 0.096 / 0.169
PS D:\python stuff\data>
```

```
== Correlation between TotalPaid and Supporter_Tenure ==
Transaction-level: Pearson=0.056  Spearman=0.112   (n=788223)
Supporter-level: total_amount vs tenure: Pearson=0.068  Spearman=0.207   (n=25649)
Supporter-level: avg_gift vs tenure: Pearson=0.073  Spearman=0.134   (n=25649)
Supporter-level: last_gift vs tenure: Pearson=0.075  Spearman=0.131   (n=25649)
PS D:\python stuff\data>
```

Random Forest Classifier - Ask Band

Birthday stats (1–2x donors only):

	Bounceback_Type	Helix_Segment	Count	Median	Mode	Mean	Min	Max	Range
0	Birthday	Aspirational	711	20.0	20.0	47.984529	5.0	5000.0	4995.0
1	Birthday	Doing Fine	570	20.0	20.0	46.296158	5.0	2000.0	1995.0
2	Birthday	Go Fair	566	20.0	20.0	37.021201	1.0	650.0	649.0
3	Birthday	Hearth & Home	1742	20.0	20.0	38.952354	5.0	1450.0	1445.0
4	Birthday	Leading Lifestyles	3036	20.0	20.0	41.583333	5.0	1000.0	995.0
5	Birthday	Metrotechs	1104	20.0	20.0	41.871830	1.0	650.0	649.0
6	Birthday	Other	284	20.0	20.0	49.753521	5.0	990.0	985.0

Christmas stats (1–2x donors only):

	Bounceback_Type	Helix_Segment	Count	Median	Mode	Mean	Min	Max	Range
0	Christmas	Aspirational	1118	20.0	20.0	47.862254	5.0	4990.0	4985.0
1	Christmas	Doing Fine	952	25.0	20.0	62.554622	5.0	9990.0	9985.0
2	Christmas	Go Fair	913	30.0	20.0	49.668127	5.0	850.0	845.0
3	Christmas	Hearth & Home	3003	25.0	20.0	49.460356	5.0	1990.0	1985.0
4	Christmas	Leading Lifestyles	5170	30.0	20.0	56.096397	5.0	3850.0	3845.0
5	Christmas	Metrotechs	1730	35.0	20.0	53.783237	5.0	1450.0	1445.0
6	Christmas	Other	498	40.0	20.0	56.590361	2.0	750.0	748.0

Education stats (1–2x donors only):

	Bounceback_Type	Helix_Segment	Count	Median	Mode	Mean	Min	Max	Range
0	Education	Aspirational	372	20.0	20.0	33.489247	5.0	550.0	545.0
1	Education	Doing Fine	313	20.0	20.0	69.632588	5.0	2500.0	2495.0
2	Education	Go Fair	323	20.0	20.0	41.377709	5.0	660.0	655.0
3	Education	Hearth & Home	923	20.0	20.0	36.767064	5.0	900.0	895.0
4	Education	Leading Lifestyles	1575	20.0	20.0	44.097143	5.0	1050.0	1045.0
5	Education	Metrotechs	514	20.0	20.0	39.422179	2.0	450.0	448.0
6	Education	Other	144	22.5	20.0	51.423611	5.0	450.0	445.0

PS D:\python stuff\data>

Supporters with 3–4 donations: 9,247

Birthday stats (3–4x donors only):

	Bounceback_Type	Helix_Segment	Count	Median	Mode	Mean	Min	Max	Range
0	Birthday	Aspirational	752	25.0	20.0	46.441489	5.0	1290.0	1285.0
1	Birthday	Doing Fine	783	40.0	20.0	61.601533	5.0	2000.0	1995.0
2	Birthday	Go Fair	726	30.0	20.0	55.140496	2.0	1050.0	1048.0
3	Birthday	Hearth & Home	2224	35.0	20.0	55.577788	5.0	2000.0	1995.0
4	Birthday	Leading Lifestyles	3804	40.0	20.0	69.877760	5.0	5000.0	4995.0
5	Birthday	Metrotechs	1268	40.0	20.0	70.481073	5.0	2250.0	2245.0
6	Birthday	Other	379	40.0	20.0	63.941953	10.0	500.0	490.0

Christmas stats (3–4x donors only):

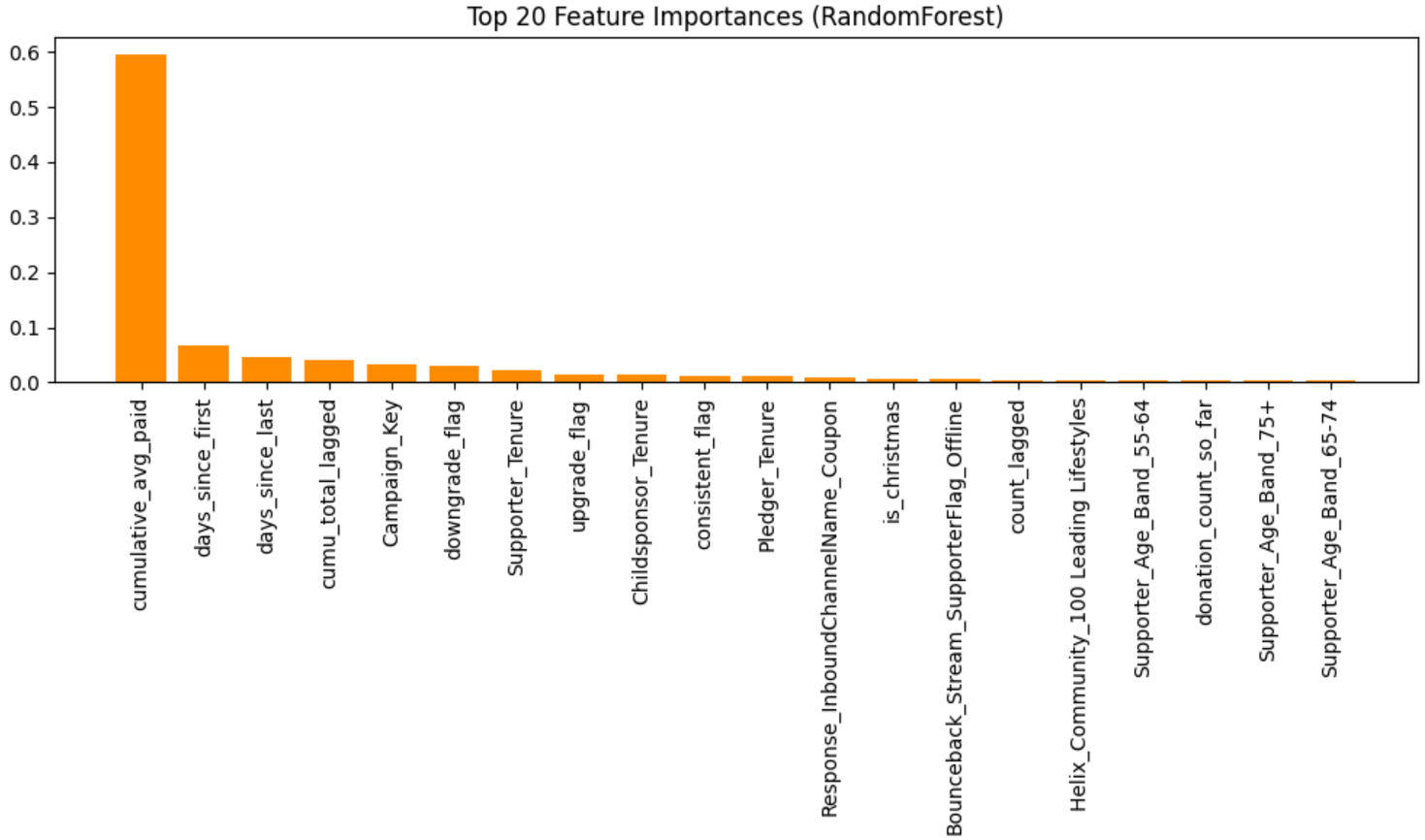
	Bounceback_Type	Helix_Segment	Count	Median	Mode	Mean	Min	Max	Range
0	Christmas	Aspirational	1085	40.0	20.0	53.526267	5.0	2020.0	2015.0
1	Christmas	Doing Fine	1186	40.0	10.0	68.165261	5.0	1150.0	1145.0
2	Christmas	Go Fair	971	40.0	10.0	59.654995	5.0	1050.0	1045.0
3	Christmas	Hearth & Home	3384	40.0	20.0	65.525709	5.0	5000.0	4995.0
4	Christmas	Leading Lifestyles	5333	45.0	20.0	74.069192	5.0	5000.0	4995.0
5	Christmas	Metrotechs	1764	45.0	20.0	70.989229	5.0	2000.0	1995.0
6	Christmas	Other	530	50.0	20.0	91.132075	5.0	3310.0	3305.0

Education stats (3–4x donors only):

	Bounceback_Type	Helix_Segment	Count	Median	Mode	Mean	Min	Max	Range
0	Education	Aspirational	475	20.0	20.0	43.722105	5.0	360.0	355.0
1	Education	Doing Fine	528	40.0	20.0	64.462121	5.0	1200.0	1195.0
2	Education	Go Fair	466	35.0	10.0	53.997854	5.0	500.0	495.0
3	Education	Hearth & Home	1483	35.0	10.0	52.646662	5.0	1050.0	1045.0
4	Education	Leading Lifestyles	2335	35.0	20.0	61.513490	5.0	4000.0	3995.0
5	Education	Metrotechs	749	40.0	20.0	60.332443	5.0	1000.0	995.0
6	Education	Other	226	40.0	20.0	83.407080	5.0	3000.0	2995.0

PS D:\python stuff\data>

Random Forest Classifier - Results



Accuracy: 0.685 F1: 0.682

	precision	recall	f1-score	support
High	0.74	0.71	0.73	2722
Medium	0.67	0.62	0.65	4284
Small	0.64	0.72	0.68	3044
accuracy			0.68	10050
macro avg	0.68	0.69	0.68	10050
weighted avg	0.68	0.68	0.68	10050