

ZIPFIAN ACADEMY

INTRODUCTION TO MARKETING ANALYTICS

SCHEDULE, DAY 1

- 9:00AM Welcome & Overview
- 10:00AM Introduction to ReadyChef
- 11:00AM Exercise
- 12:00PM Lunch!
- 1:00PM Churn Prediction
- 2:00PM Exercise
- 3:00PM Expected Value, Lift
- 4:00PM Exercise
- 4:45PM Review, Day 1

WHY IS THIS GUY
TALKING TO US?

SIMPLE.

I am going to try to convince you **not** to focus on growth.

*BUT GROWTH IS A GOOD
THING! WHY SHOULDN'T
WE FOCUS ON IT?*

*BECAUSE THE BEST (OR AT LEAST THE
CHEAPEST) WAY TO GET GROWTH IS BY
NOT FOCUSING ON IT.*

THE FIVE START-UP SUPER METRICS

- **A**cquisition: users come to the site from various channels
- **A**ctivation: users enjoy 1st visit: “happy” user experience
- **R**etention: users come back, visit site multiple times
- **R**eferral: users like it enough to refer others
- **R**evenue: users conduct some monetization behavior

QUIZ: WHICH METRICS BELOW MATTER THE MOST, WHEN IT COMES TO GROWTH?

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QUIZ: WHICH METRICS BELOW MATTER THE MOST, WHEN IT COMES TO GROWTH?

- Acquisition: users come to the site from various channels
What most people think
- Activation: users enjoy 1st visit: “happy” user experience
- Retention: users come back, visit site multiple times
What secretly matters more
- Referral: users like it enough to refer others
- Revenue: users conduct some monetization behavior

How MOST people think about growth:

How many **signups & activations** have we had?

How can we get more **signups & activation**?

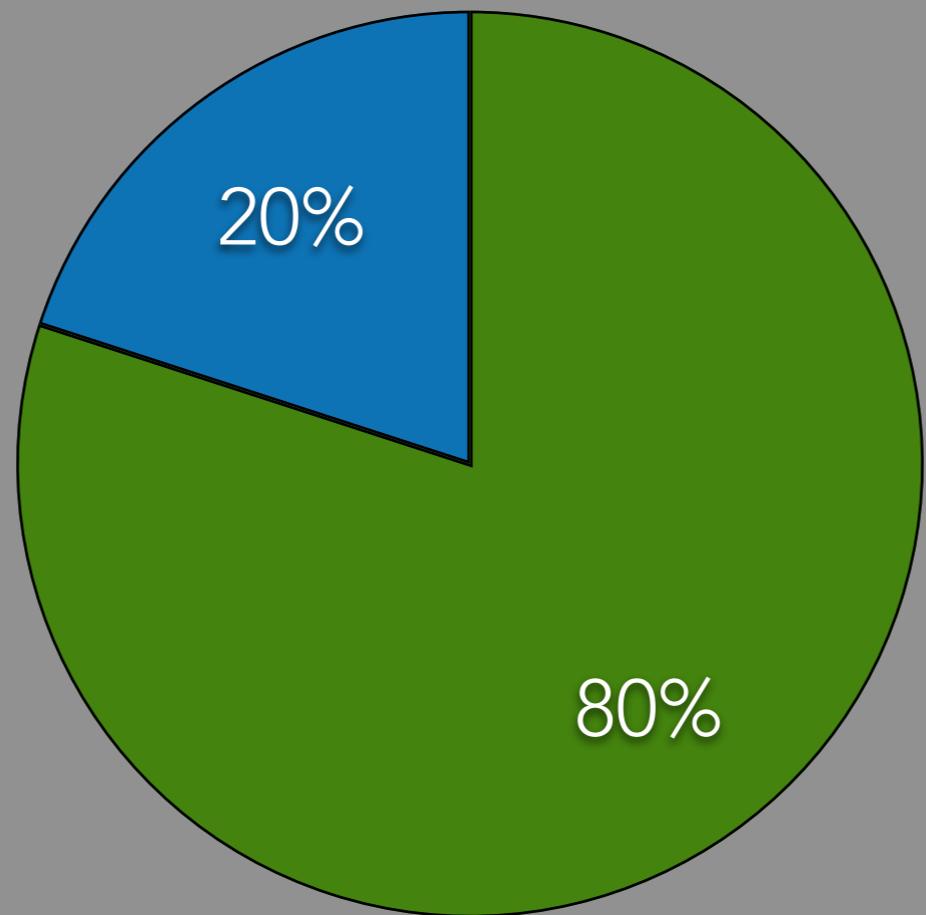
How they SHOULD think about growth:

How can I **retain** an insanely high percentage of my users?

How can I get them to **refer** their contacts to my product?

The Pareto Principle

● Effect ● Customers



CUSTOMER LIFETIME VALUE



Customer Lifecycle Marketing



Customer Lifetime Value

LOCATION	TOTAL SPEND	CUSTOMERS	CAC*
ADWORDS	\$100	100	\$1
FACEBOOK	\$150	50	\$3
PINTEREST	\$250	25	\$10

* Customer Acquisition Cost; also known as "Cost Per Acquisition (CPA)"

Customer Lifetime Value

LOCATION	TOTAL SPEND	CUSTOMERS	CAC*	CLV	REVENUE	PROFIT
ADWORDS	\$100	100	\$1	\$10	\$1000	\$900
FACEBOOK	\$150	50	\$3	\$30	\$1500	\$1350
PINTEREST	\$250	25	\$10	\$100	\$2500	\$2250

* Profit is defined as Revenue – (number of customers × CAC). For the sake of this exercise, it does not take into account other costs.

HOW DO YOU CALCULATE CLV?

- Simplest approach for calculating CLV is using Historical CLV, which computes a customer's lifetime value based on what they have previously spent with you.
- Two popular approaches: [Average Revenue Per User \(ARPU\)](#) and [Cohort Analysis](#)
- Note: Historical CLV does not account for time. It puts all of your customers — new and old — in the same bucket. If your customer base begins to shift, prior CLVs may not accurately predict future CLVs

HOW DO YOU CALCULATE CLV?

- **IMPORTANT:** Never compute CLV as “total revenue / total customers”. This ignores how long customers have been with you!
- **Historical CLV** = Calculate the average revenue per customer per month, add them up, and multiply by 12 to get a 1-year CLV

HOW DO YOU CALCULATE CLV?

CUSTOMER NAME	PURCHASE DATE	AMOUNT
ALICE	JAN 1, 2013	\$150
ALICE	MAY 15, 2013	\$50
ALICE	JUNE 15, 2013	\$100
BOB	MAY 1, 2013	\$45
BOB	JUNE 15, 2013	\$75
BOB	JUNE 30, 2013	\$100

Suppose today is July 1, 2013. Your average monthly revenue from Alice is $(\$150 + \$50 + \$100)/6 = \50 and your average monthly revenue from Bob is $(\$45 + \$75 + \$100)/2 = \110 .

Adding these two numbers gives you an average monthly revenue per customer of $\$160/2 = \80 . To find a 12-month or 24-month CLV, multiply that number by 12 or 24.

COHORT ANALYSIS

- Takes the ARPU approach one step furtherInstead of calculating an overall average monthly revenue per user, cohort analysis calculates an ARPU per month per cohort

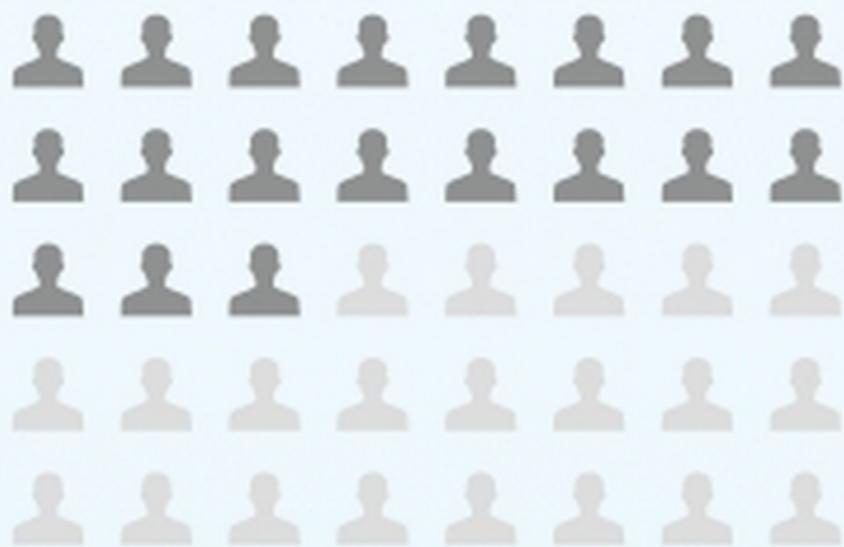
Cohort Analysis



Month 1



Month 2



Month 3



Month 4

Cohort Analysis

A simple cohort

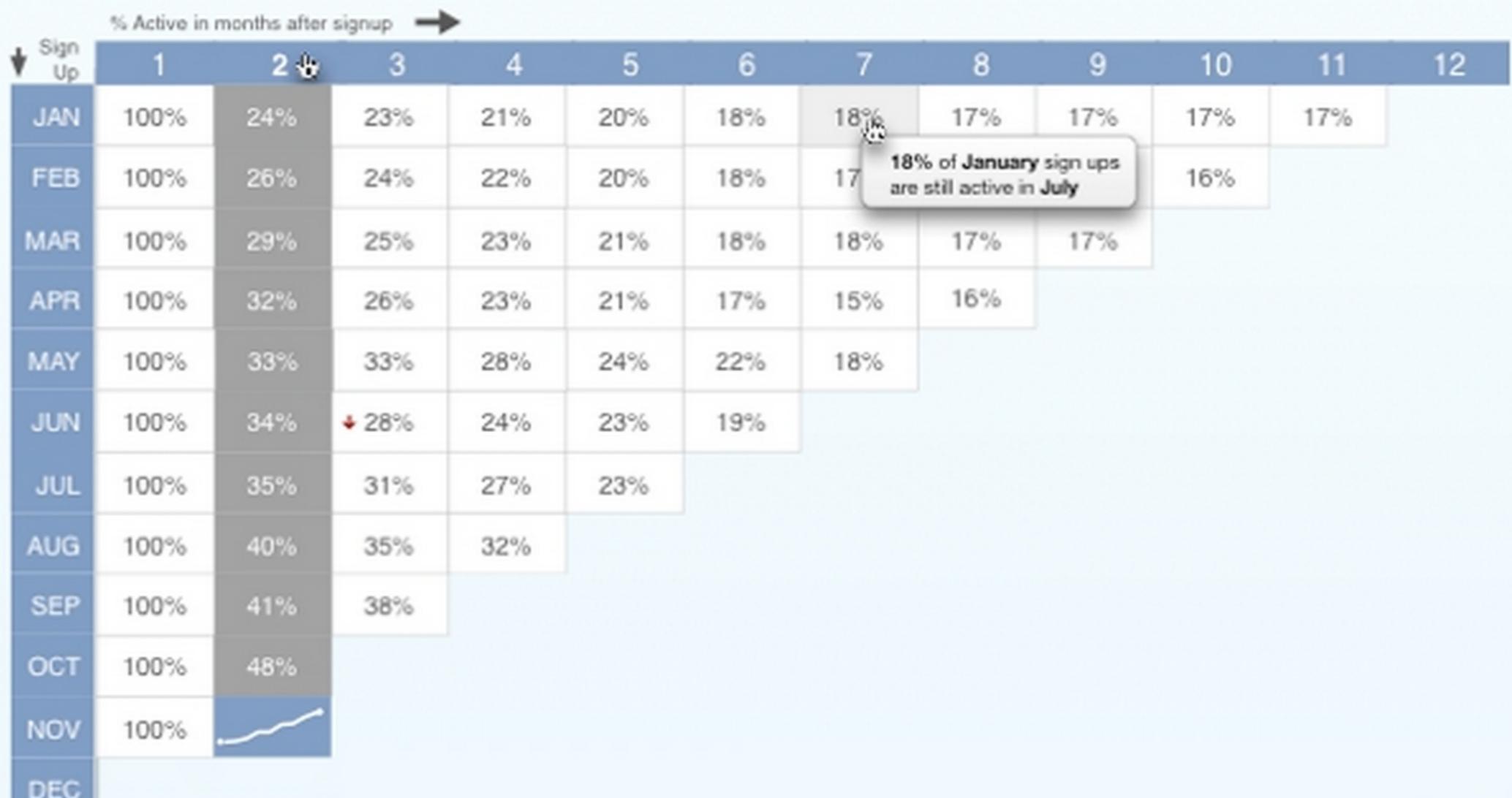
Signed up in ↓	% Still active in following months. →				
	1	2	3	4	5
JAN	100%	24%	23%	21%	20%
FEB	100%	26%	24%	22%	20%
MAR	100%	29%	25%	23%	21%
APR	100%	32%	26%	23%	21%
MAY	100%	33%	28%	24%	21%

24%

This means 24% of the users who signed up in February, were still active in their third month (April)

Cohort Analysis

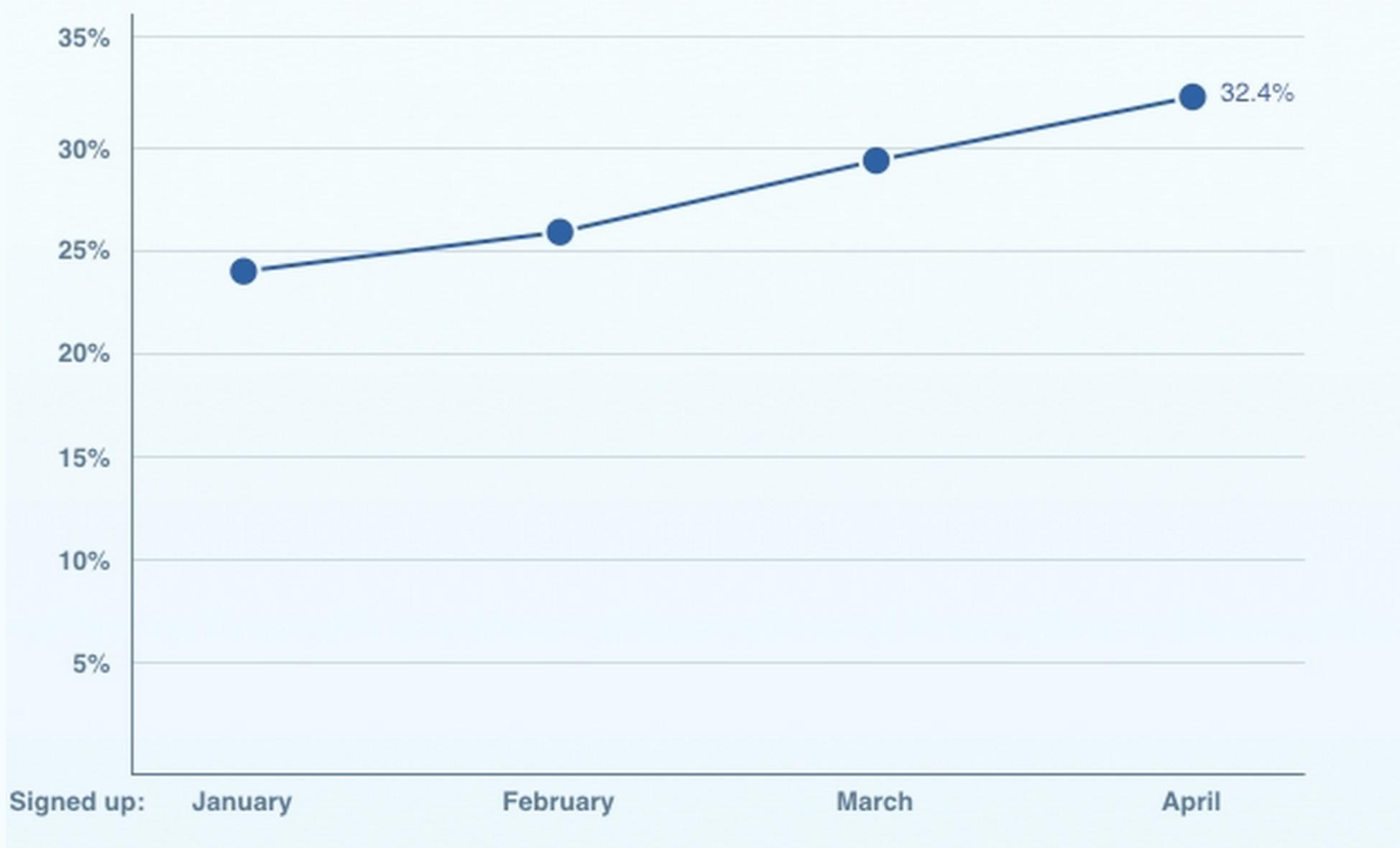
A full cohort analysis



Cohort Analysis

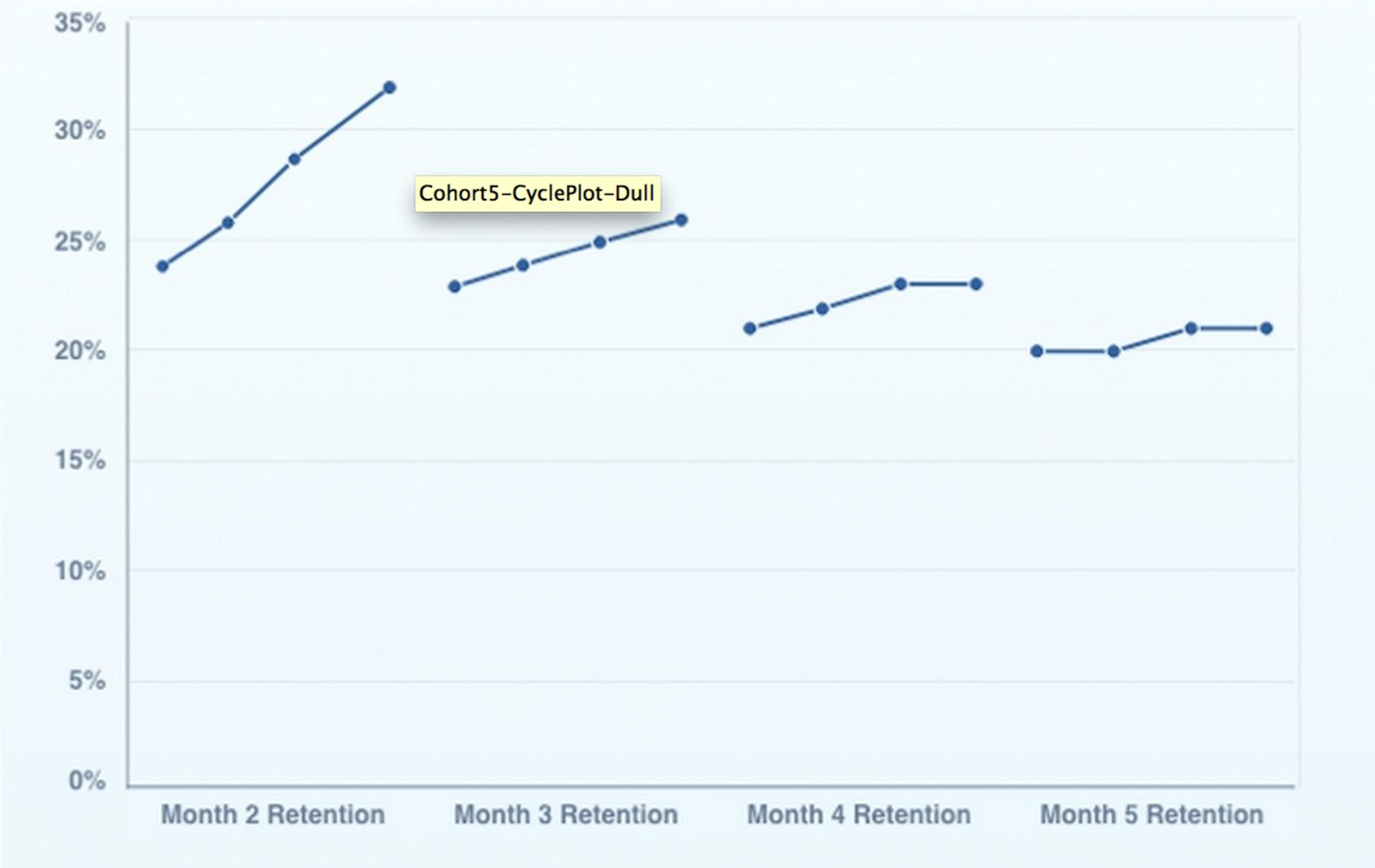
Cohort4-SimpleLinePlot

How many stick around for a second month?



Cohort Analysis

Retention using a cycle plot



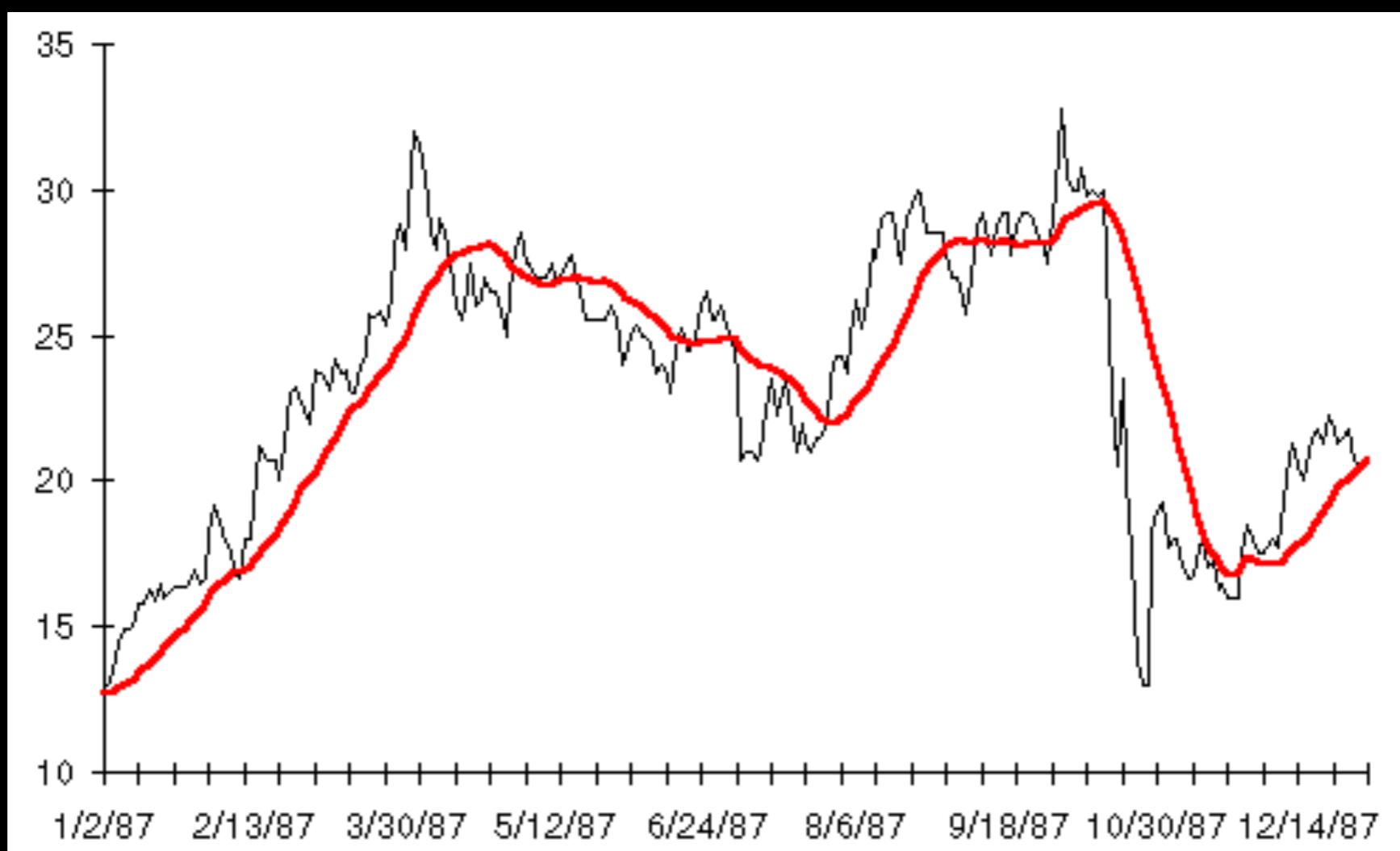
Cohort Analysis

Retention using a cycle plot

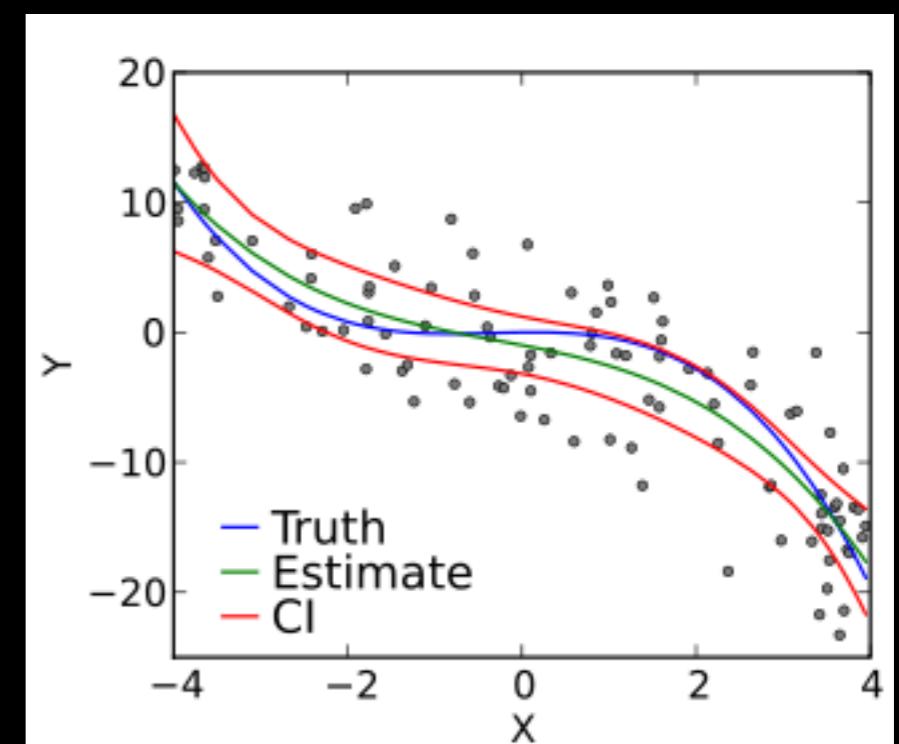
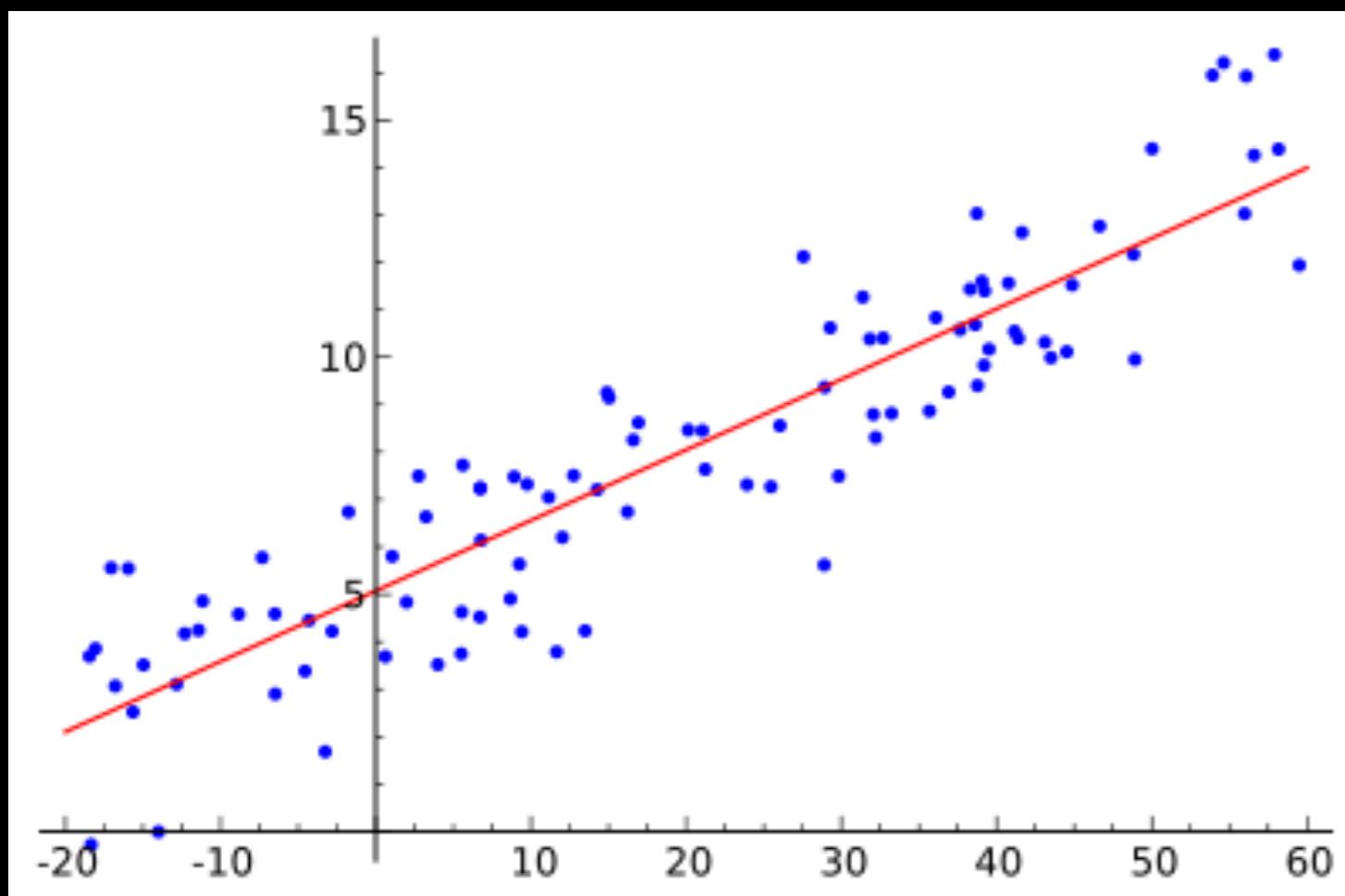


Cohort Analysis

MOVING AVERAGES



REGRESSION



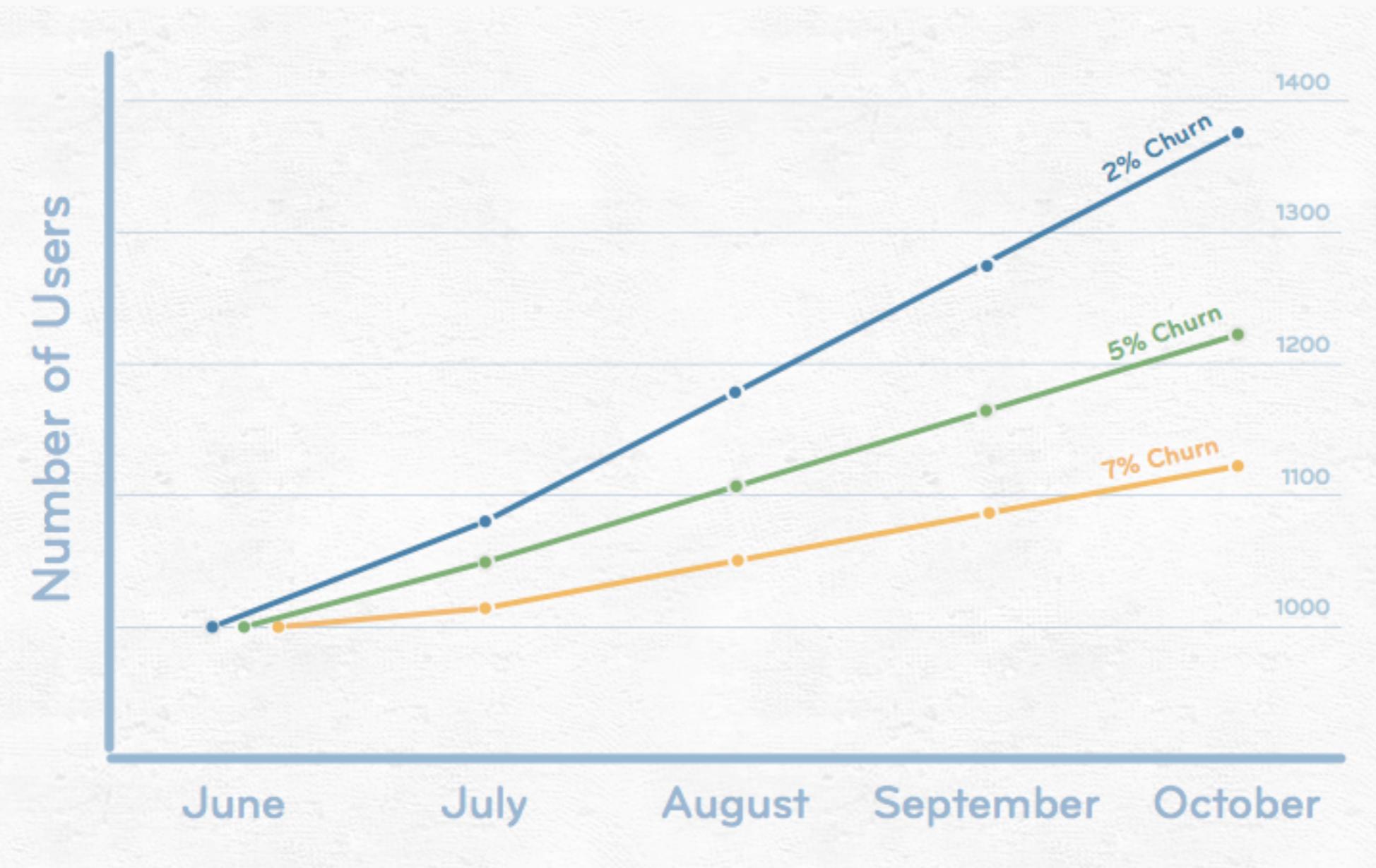
PREDICTING CUSTOMER CHURN

A scenic view of a river flowing over rocks, with dense green trees lining the banks. The water is clear and turbulent, creating white foam as it cascades down the rocky bed. The surrounding environment is lush and green, suggesting a natural, possibly forested area.

FIRST, WHAT IS CHURN?

“Churn rate (sometimes called attrition rate), in its broadest sense, is a measure of the number of individuals or items moving out of a collective over a specific period of time.”

-WIKIPEDIA



THREE TYPES OF CHURN

- Account Churn: Where we have lost the customers completely
- Product Churn: Where the customer has lowered its product profile, e.g. from 5 products to 3 products, or spending has reduced
- Activity Churn: Where the customer has lowered their engagement or use

QUIZ: WHICH TYPE OF CHURN SHOULD YOU FOCUS ON?

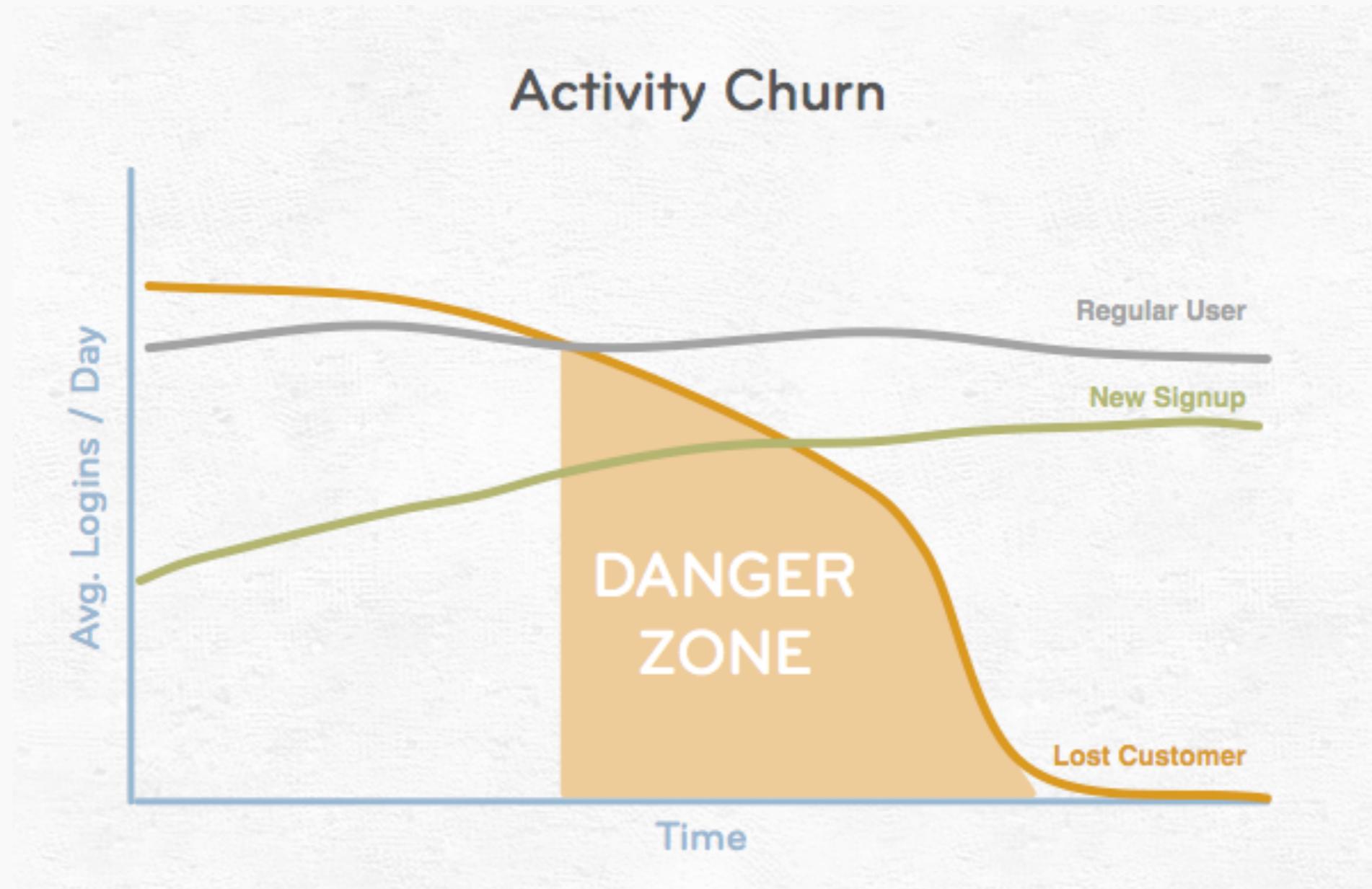
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CHURN IS ALWAYS AMBIGUOUS

When someone tells me they have 5% churn and asks if that's good, I can never answer easily. It's such a vague figure that I have to fall back to a set of clarifying questions:

- Does this figure include users who signed up during this month, or only lost customers from the previous month? In short, if we started with 100 customers, gained 30 sign ups and finished the month with 110 customers, what churn rate would we ascribe?
- What is the revenue churn compared to the user churn? 5% is fine if it's only free users you're losing, but what if that 5% happened to be all your premium customers, or 50% of your revenue?
- What is the activity churn? How many customers were previously active but have now stopped using it? This is usually an indicator of churn to come.

ACTIVITY CHURN IS WHAT MATTERS



Be Careful With Your Emails



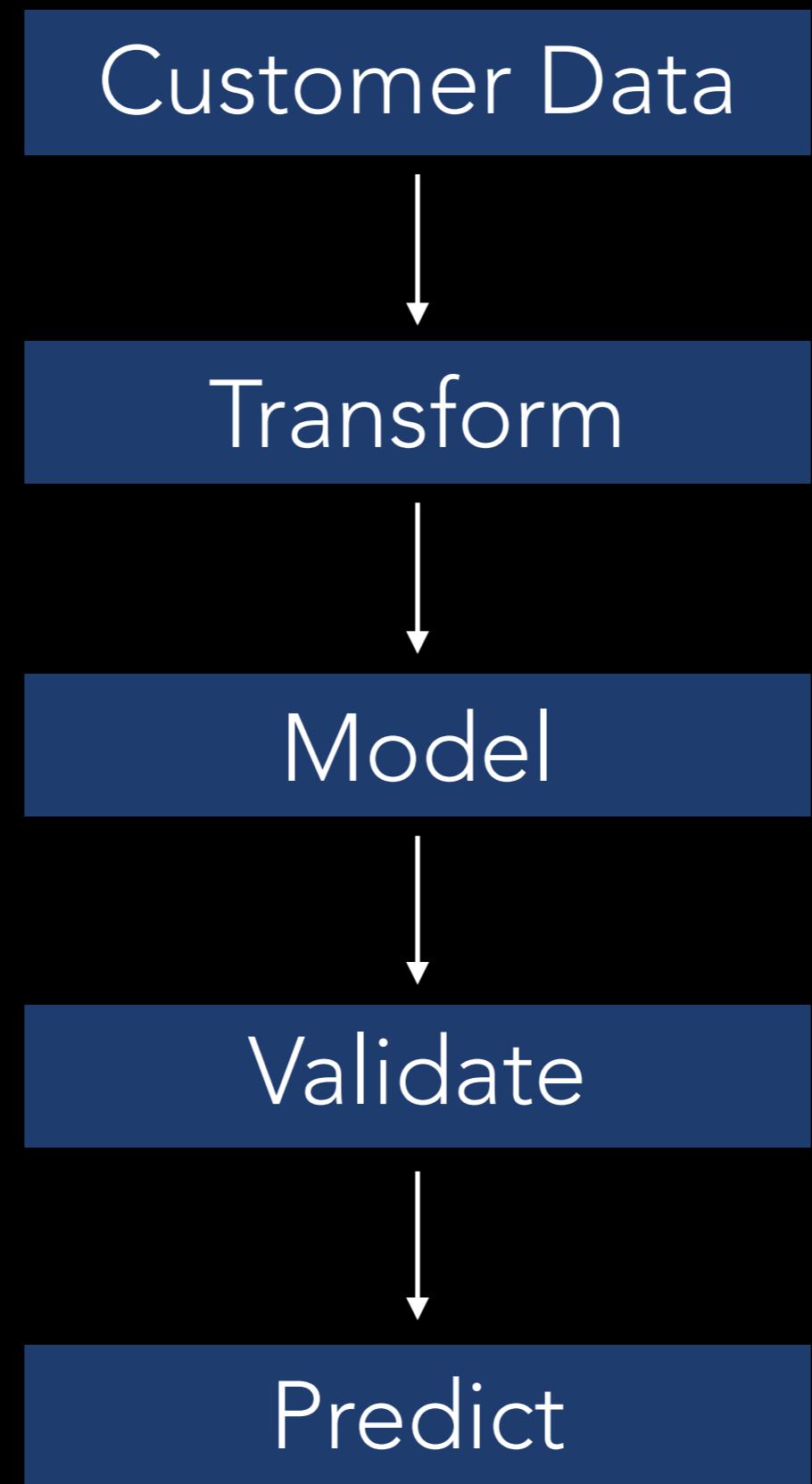
GUIDELINES FOR RE-ENGAGEMENT E-MAILS

1. TARGET THE RIGHT CUSTOMERS
2. BE PERSONAL
3. BE INTERESTING
4. BE VISUAL
5. BE THANKFUL, HONEST, AND RESPECTFUL

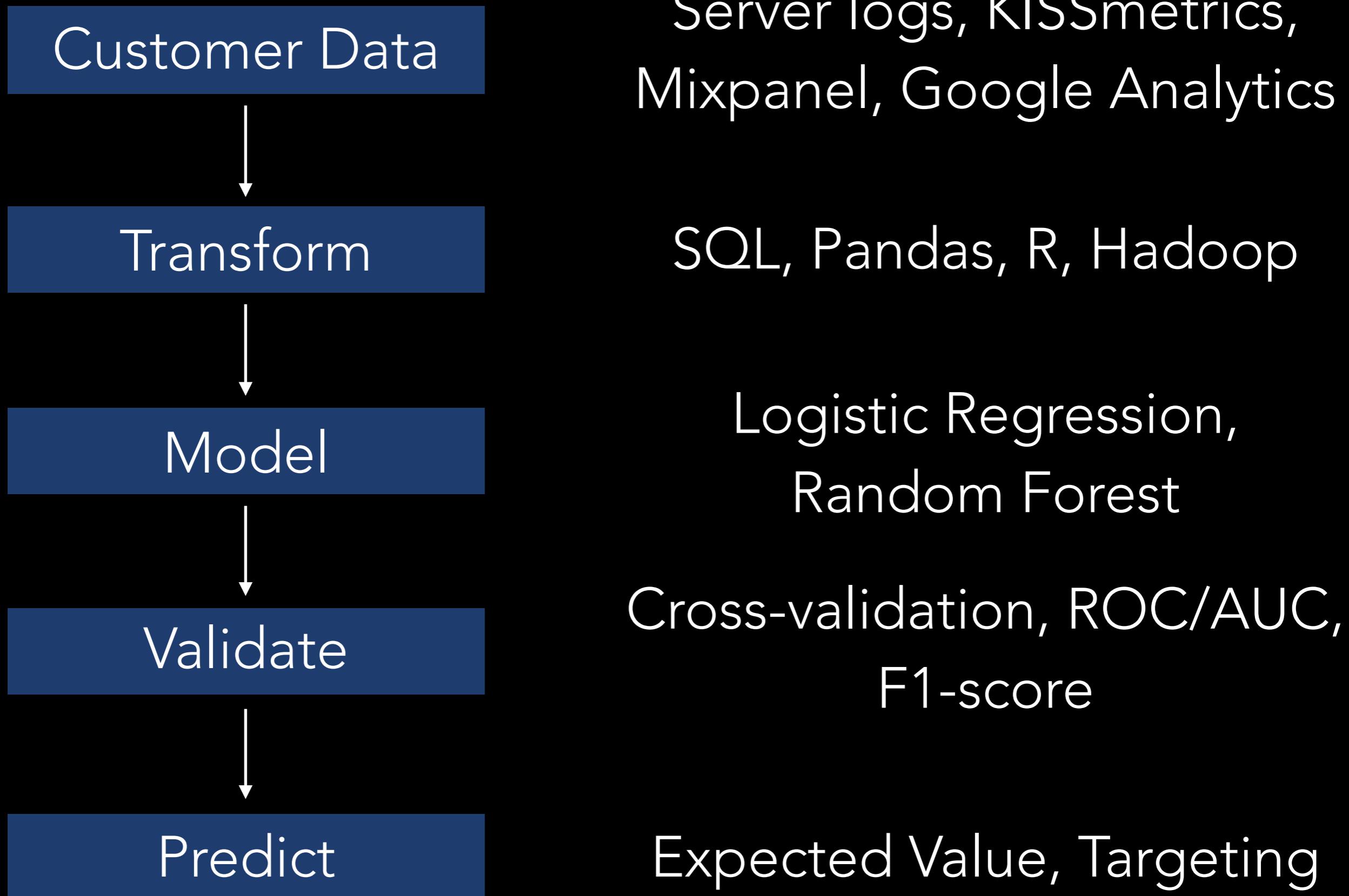
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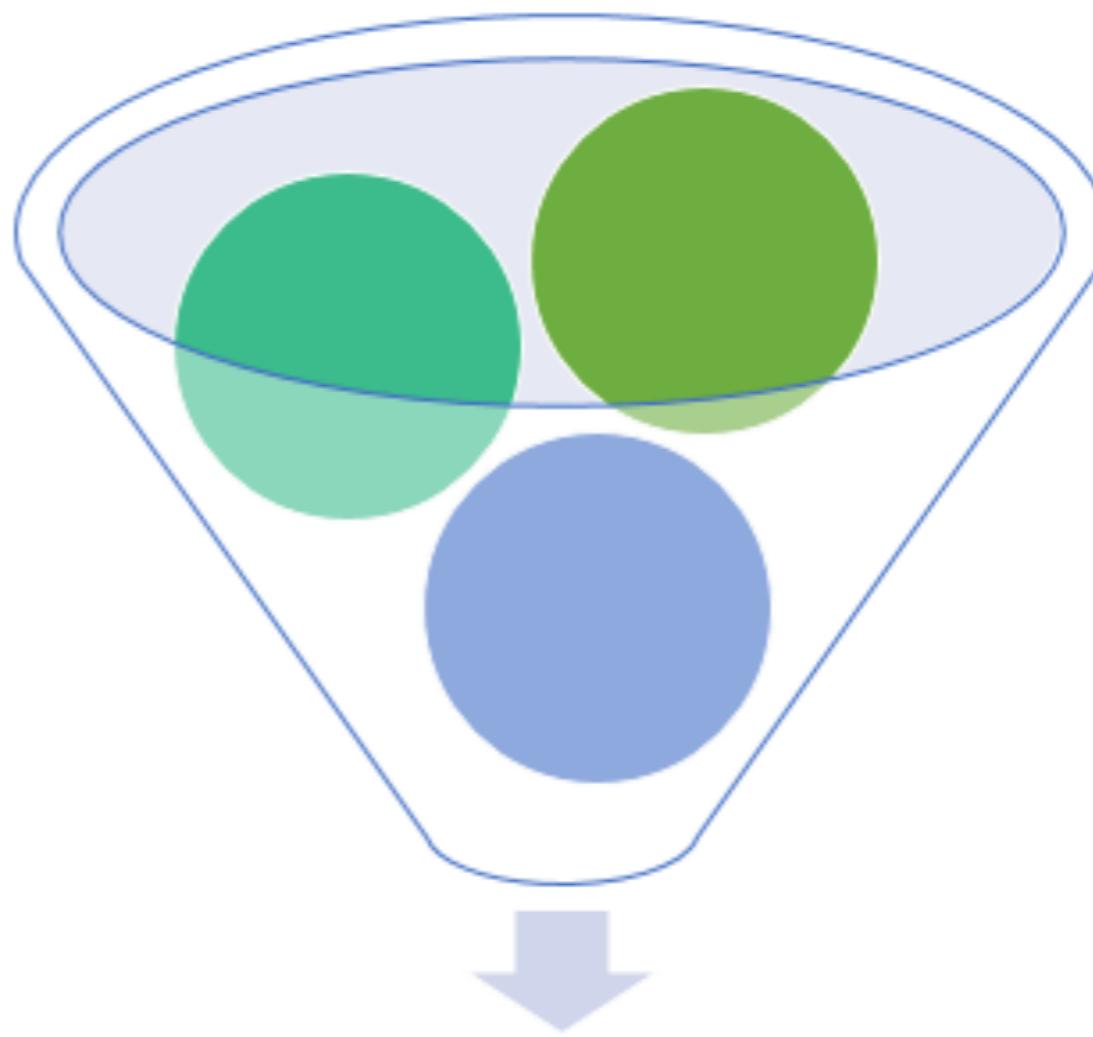
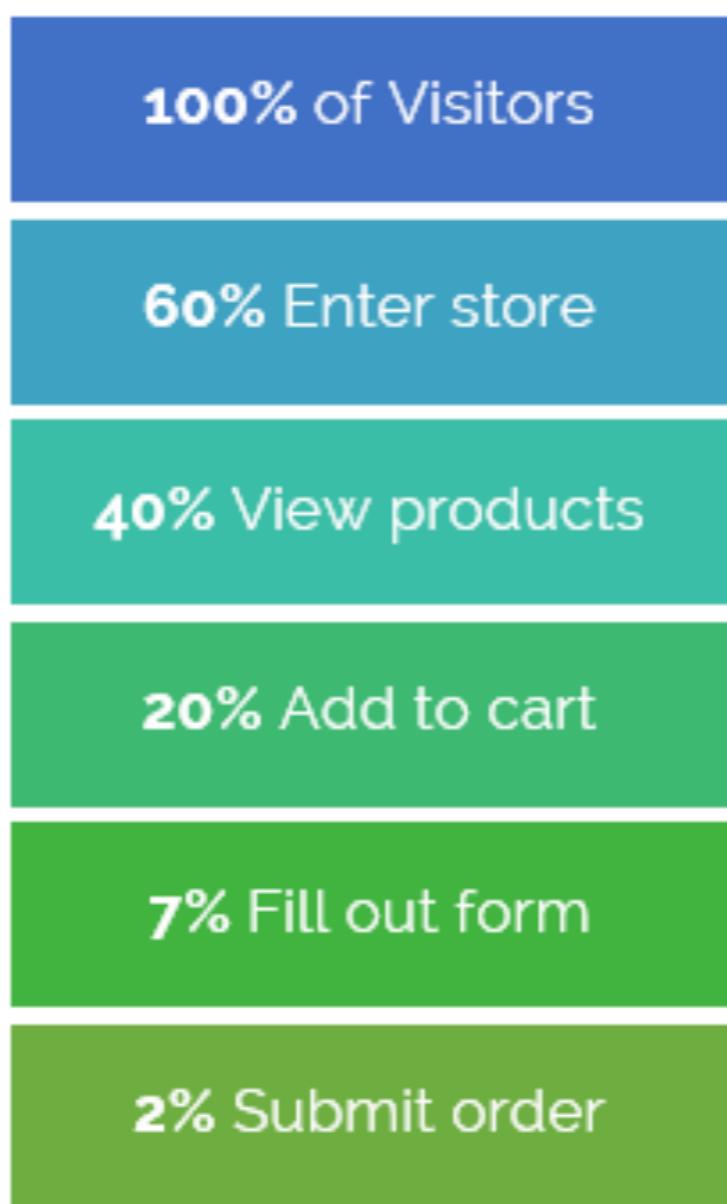
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1. TARGET THE RIGHT CUSTOMERS



Funnel Analysis



Conversion!



	VARIATION A	VARIATION B
Banner	 	 
Home Page Feature		
Button 1		
Button 2		

Cohort Analysis

```
SELECT ROUND_TO_COHORT_SIZE(m.signup_date) AS cohort,  
ROUND_TO_GRANULARITY(t.timestamp) AS period, my_metrics  
  
FROM traffic_logs t JOIN member_info m ON  
t.member_id=m.member_id  
  
GROUP BY cohort, period  
  
ORDER BY cohort, period;
```

ROUND_TO_COHORT_SIZE would be daily, weekly, monthly, etc. - the size of the cohorts in the chart, and ROUND_TO_GRANULARITY is the aggregate size - the length between dots in the time series..