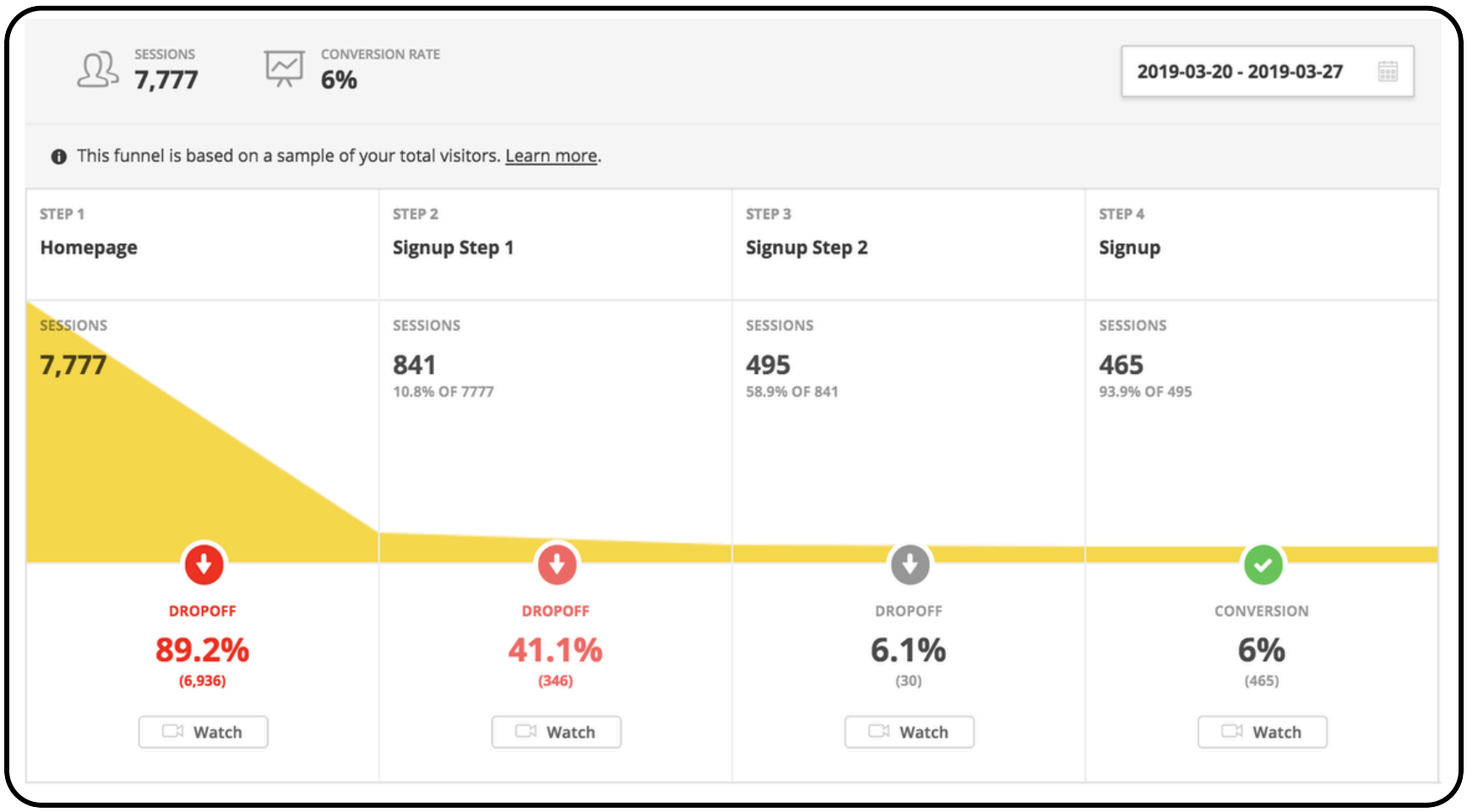
5 Types of Analysis

Every **Product Analyst** Should know

Leon Jose



As a product analyst, I've learned that the key to improving a product lies in analyzing data.

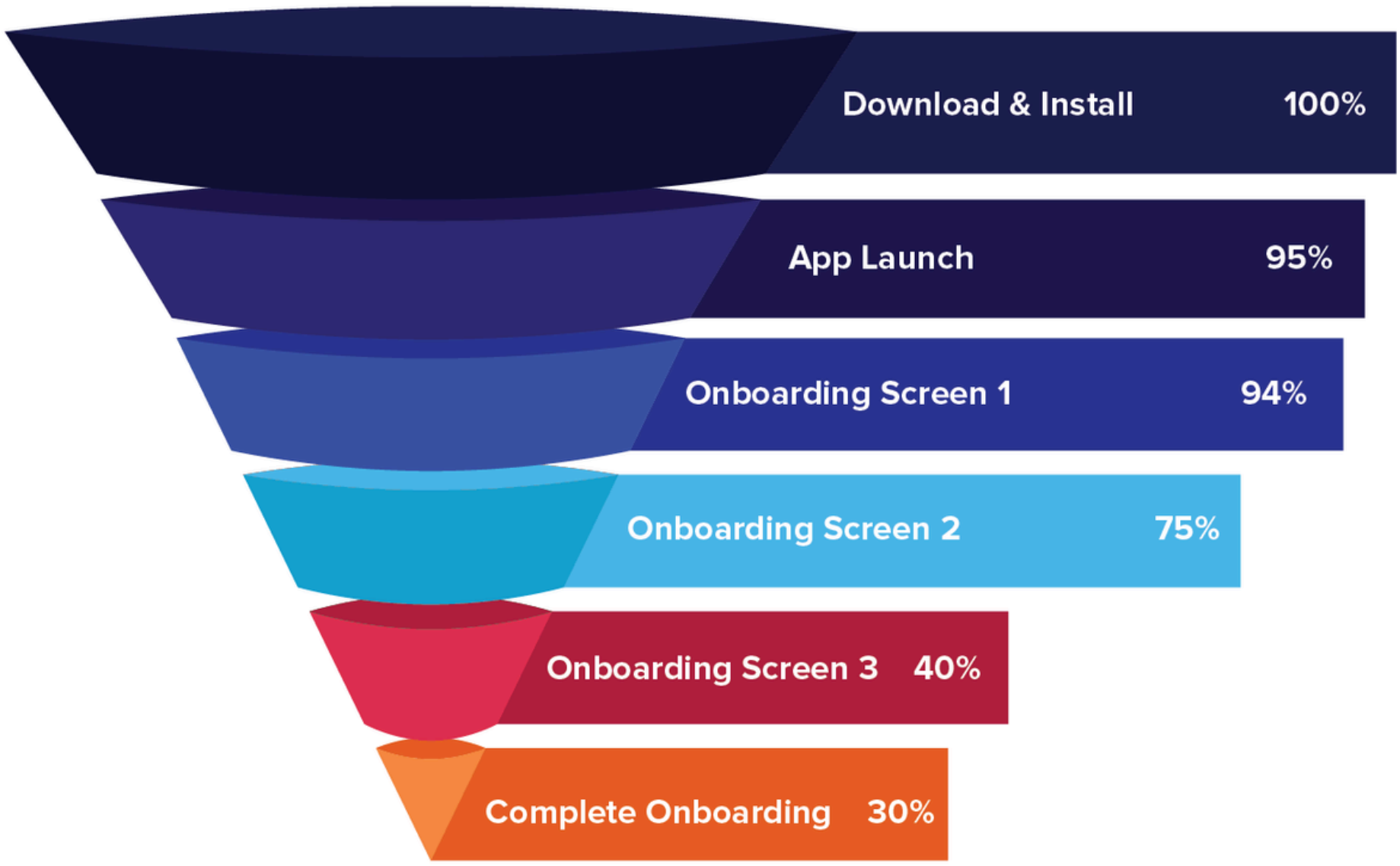
Today, I want to share with you five essential types of product analysis that every product analyst should be familiar with.

These methods will help you dig deep into user behavior, improve your product’s performance, and make data-driven decisions that matter.

1

Funnel Analysis: Track User Progress Through Specific Steps

How many new users successfully complete the onboarding process?



Most new users who drop out do so between screens 2 and 3. Time to run an A/B test with a shorted onboarding process.

Image credits: CleverTap

Funnel analysis is all about tracking how users move through specific steps in your product, such as signing up, making a purchase, or completing a key action.

By understanding where users drop off, you can pinpoint areas of friction that are causing users to abandon the journey.

For example, let’s say you’re working on an e-commerce site.

The typical funnel might look like this:

users arrive on the homepage → view a product → add it to the cart → proceed to checkout → complete the purchase.

If you notice a high drop-off rate between "add to cart" and "proceed to checkout," it indicates a problem with your checkout process.

Maybe users are hesitant about shipping costs or there's a complex form to fill out.

How to Use It:

- Set up funnel stages in your tool.
- Track user actions at each stage of the funnel.
- Look for stages with high drop-off rates and dig deeper to understand the cause.

2

Cohort Analysis: Group Users by Behaviors or Traits

Retention rates by weeks after signup

Cohort	New Users	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Apr 27, 2014	79	22%	19%	13%	19%	16%	23%	19%	20%	11%	14%	16%	10%	10%	10%	8.9%	6.3%	6.3%
May 04, 2014	168	23%	21%	21%	24%	24%	29%	24%	18%	22%	14%	14%	12%	13%	9.5%	9.5%	6.5%	
May 11, 2014	188	19%	19%	13%	21%	19%	20%	24%	21%	16%	14%	13%	10%	9.0%	9.0%	7.4%		
May 18, 2014	191	23%	21%	22%	22%	26%	27%	29%	26%	21%	21%	17%	15%	10%	5.8%			
May 25, 2014	191	21%	16%	20%	24%	27%	23%	20%	19%	15%	15%	12%	12%	5.8%				
Jun 01, 2014	184	24%	24%	24%	24%	21%	21%	18%	20%	16%	15%	18%	6.5%					
Jun 08, 2014	182	19%	16%	25%	19%	23%	28%	22%	18%	13%	9.9%	4.9%						
Jun 15, 2014	209	24%	20%	24%	22%	23%	17%	18%	15%	13%	7.2%							
Jun 22, 2014	217	22%	19%	19%	20%	20%	17%	19%	18%	12%								
Jun 29, 2014	221	18%	18%	24%	24%	23%	19%	20%	7.7%									
Jul 06, 2014	203	24%	23%	18%	16%	24%	22%	16%										
Jul 13, 2014	188	24%	18%	20%	18%	21%	9.6%											
Jul 20, 2014	228	19%	14%	14%	14%	7.5%												
Jul 27, 2014	204	14%	12%	15%	11%													
Aug 03, 2014	230	22%	17%	11%														
Aug 10, 2014	245	16%	8.2%															
Aug 17, 2014	252	12%																
Aug 24, 2014	251																	

Image credits: Mode Analytics

Cohort analysis helps you understand trends over time by grouping users based on specific behaviors, traits, or attributes.

This analysis is helpful because it allows you to track how different groups of users behave after they interact with your product, instead of looking at overall data which can be too generalized.

For example, you might group users by the month they signed up, and then track how long they stick with your product.

If you see that users who signed up in January have a higher retention rate than those who signed up in February, you might want to investigate what's different about the two cohorts.

Did the product experience change in February? Were there new features or bugs?

Tools: Mixpanel and Amplitude are fantastic for cohort analysis. In these tools, you can segment users by acquisition date, actions taken, or even specific traits (like user type or device).

How to Use It:

- Group users by shared characteristics (e.g., sign-up month, country, device).
- Track their behavior over time, focusing on retention, engagement, or conversions.
- Look for trends and identify which cohorts are the most valuable.

3

Retention Analysis:

Measure How Often Users Come Back

Retention analysis helps you track how often users return to your product after their first use.

Let’s say you’ve launched a new feature in your app, and you want to see how often users engage with it after the first use.

Retention analysis will help you understand whether users are sticking around and regularly interacting with the feature, or if they drop off after the initial experience.

Tools: You can use tools like Google Analytics, Mixpanel, or Amplitude to track retention. They all have features that let you monitor returning users over specific time periods (e.g., Day 1, Day 7, Day 30).

How to Use It:

- Measure the percentage of users who return after their first visit.

- Analyze retention by different time periods (e.g., after 1 day, 1 week, 1 month).

- Look for patterns in user behavior and find out what drives users to keep coming back.

4

A/B Testing:

Compare Different Versions of a Feature

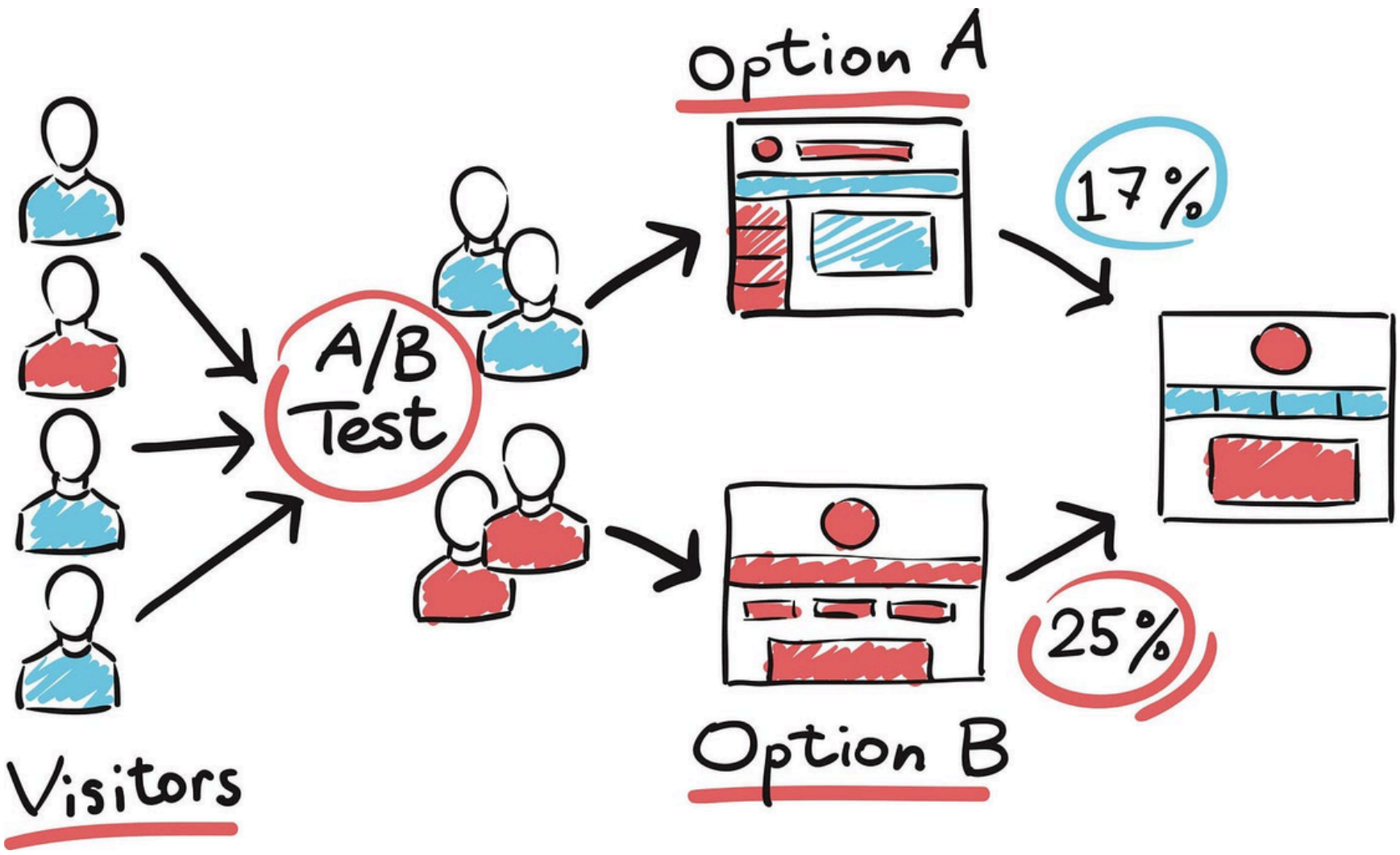


Image credits: diggintravel.com/airline-ab-testing/

A/B testing is one of the most powerful tools you can use to compare two versions of a feature to see which performs better.

Whether it’s testing a new call-to-action button, a new layout for your landing page, or a different feature workflow, A/B testing helps you make data-driven decisions rather than relying on guesswork.

For example, if you're testing two versions of a signup page - one with a prominent "Sign Up" button and one with a more subtle design - A/B testing will show you which version results in more signups.

Tools: Optimizely, Google Optimize, and VWO are popular tools for A/B testing. These tools let you easily create experiments, split traffic, and track performance metrics like conversion rates, engagement, and retention.

How to Use It:

- Create two or more variations of a feature or page.

- Split your user base into equal segments to show them different versions.

- Track key metrics like conversion rates or user engagement to determine which version performs best.

5

Behavioral Analysis: Understand How Users Interact with Your Product

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Behavioral analysis is about understanding how users engage with your product.

It looks at actions like clicks, scrolls, time spent on specific pages, or interactions with features.

By analyzing user behavior, you can optimize user flows and ensure that users are having a seamless experience.

For example, you might discover that users tend to click through to a specific feature, but then quickly abandon it.

This could be an indication that the feature is too complicated or not clearly explained.

Tools: Tools like Hotjar and Crazy Egg are excellent for tracking user behavior through heatmaps, session recordings, and user surveys.

These insights give you a deeper understanding of how users navigate your product and where they encounter issues.

How to Use It:

- Set up heatmaps to see where users are clicking or spending the most time.

- Use session recordings to watch how users interact with specific features.

- Look for patterns and areas where users get stuck or abandon the product.

Remember, the tools you use will vary depending on your specific needs, but Google Analytics, Mixpanel, CleverTap, Hotjar, and Crazy Egg are all great places to start.

Keep experimenting, analyzing, and iterating - this is the key to building better products that your users will love.

Found this helpful? Repost!

Leon Jose