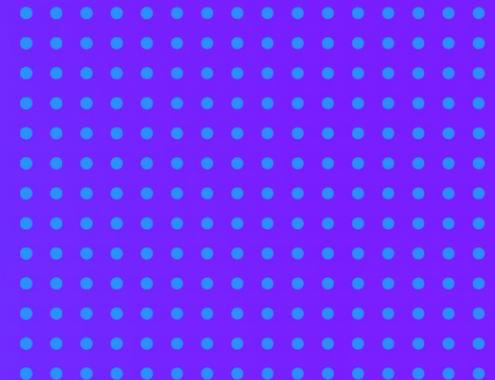




# Empowering your business with Feature Experimentation

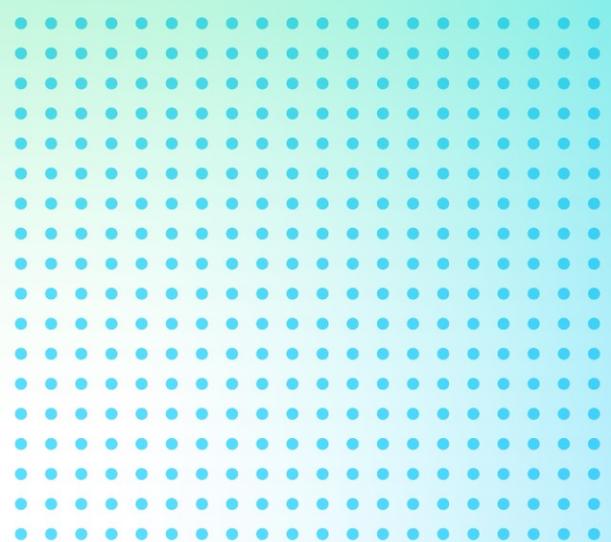




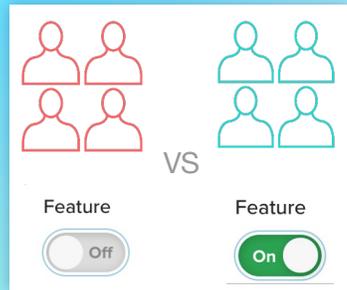
**Hristo Bakalov a.k.a The Project Owner**  
**Solution Architect, Optimizely**



**Kunal Shetye a.k.a The Solution Architect**  
**Senior Solution Architect, Optimizely**

- 
- 1. Introduction to Feature Experimentation**
  - 2. Demo**
  - 3. Q&A**

# Introduction to Feature Experimentation



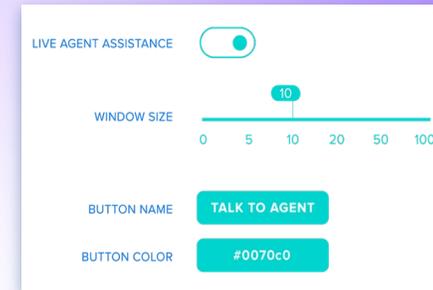
## Feature Flagging

Create features in Optimizely to enable feature release and experimentation without a code deploy.



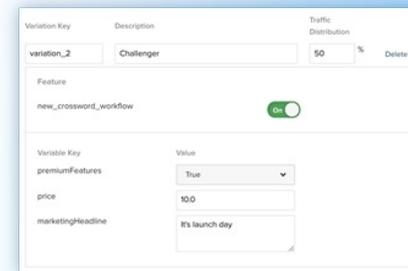
## Feature Rollouts

Gradually roll out a feature to monitor impact on performance and business metrics.



## Feature Variables

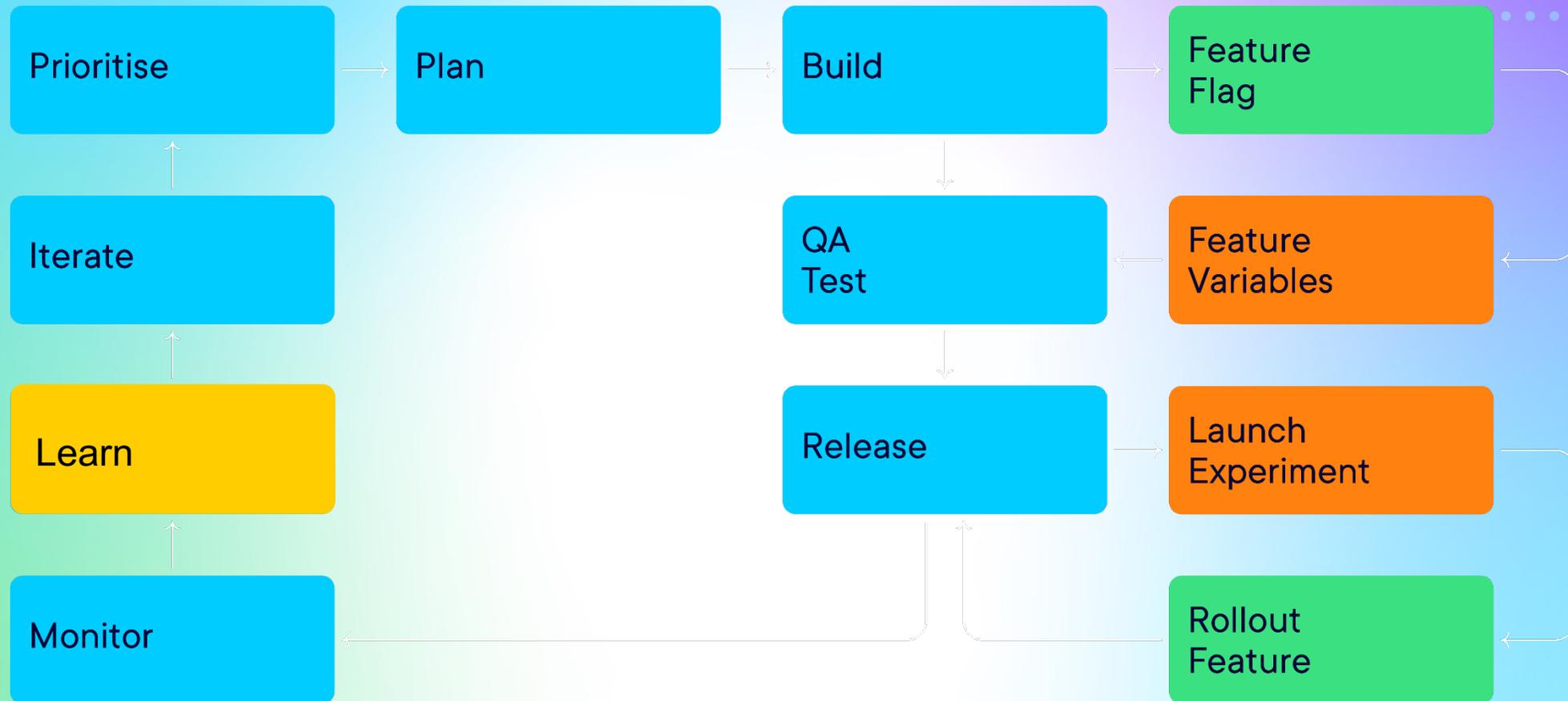
Dynamic variables that can be tested without updating code.



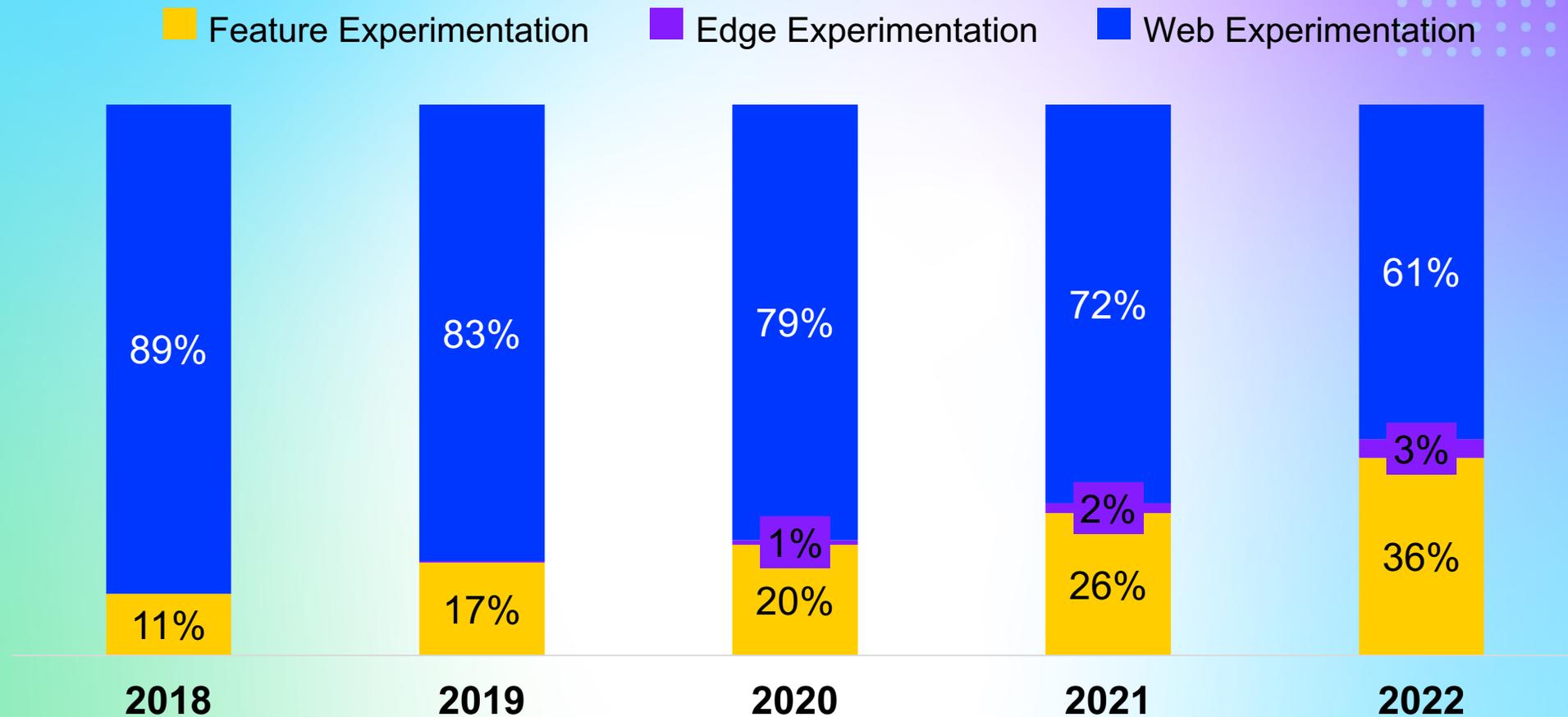
## A/B/n & Feature Tests

Run experiments on existing features and elsewhere to optimize your application.

# Test and Learn as part of your Software Development Cycle



# Server-side experimentation is becoming increasingly adopted as maturity grows



# The Plan



Ideation

- Test Ideas

## Backlog of Ideas

A Central repository for all our experiment ideas

- New Features
- Design Experiments
- MVP product changes



Define & Design

- Test Product

## Minimum Viable

Lets see how many people are interested in a new feature before we do the work of integrating



Code & Release

- Feature Flag

## Launch New Feature

Engineers look to build our experiment as a feature in the codebase wrapped in a feature flag in order to control its release.



Measure & Iterate

- Feature Experiment

## Launch New Feature as an Experiment

We want to ensure the feature does deliver against our KPIs, we also wanted to validate if being shown the price made a difference



Optimize & Grow

- CRO & Experimentation

## Experiment and Learn

Conversion rate optimization on Attract, Engage, & Convert parts of your site. Enhancing the use experience.

# Sprint Planning

The screenshot displays a software interface for experimentation, specifically a sprint planning view. The main content area is titled 'User feedback widget' and is marked as 'In Progress'. It features a sidebar with navigation options like 'Home', 'Plan', and 'Requests'. The central panel shows a 'Brief - User feedback widget' with sections for 'Overview', 'Objectives', 'Goals', and 'Success Metrics'. The 'Overview' section states the objective is to develop a user feedback widget for digital platforms. The 'Goals' section lists 'Enhanced User Engagement', 'Real-Time Feedback Collection', and 'User Experience Improvement'. The 'Success Metrics' section includes 'User engagement rate', 'Volume and quality of feedback', and 'Impact on overall user satisfaction'. On the right, a 'Workflow' section shows a '1. Requirements' step with sub-steps like 'Idea Accepted', 'Complete Experiment Template', and 'Approve Experiment'. The 'Approve Experiment' step is marked as 'Approved' and completed by Hristo Bakalov. The interface also includes a top navigation bar with search and notification icons, and a bottom status bar.

Experimentation Collab SA

All

Home

Plan

Requests

Hypothesis | HF

Hypothesis | HPT-231

New design for

User feedback widget

In Progress

Share

1

Mark Complete

Started • Nov 23

Due • Jan 01, 2024

Workflow

Comments

Attachments

Experimentation Workflow (Jira)

1. Requirements

Add Description

Idea Accepted

Complete Experiment Template

Approve Experiment

Completed by Hristo Bakalov

Add Description

Approved

+ Add Sub-Step

2. Backlog

3. Creative Design

4. Experiment Build in Web Interface

Page

# Create the feature flag

## Mosey Credit Card

FEATURE EXPERIMENTATION

- Projects
- Flags**
- Reports
- Audiences
- Events
- History
- Settings
- Tutorial

# Slack Community

Developer Docs

Program Management

Help

Hristo B. Account Settings Profile Log Out

©2010–2023 Optimizely. [Privacy](#)

## Flags

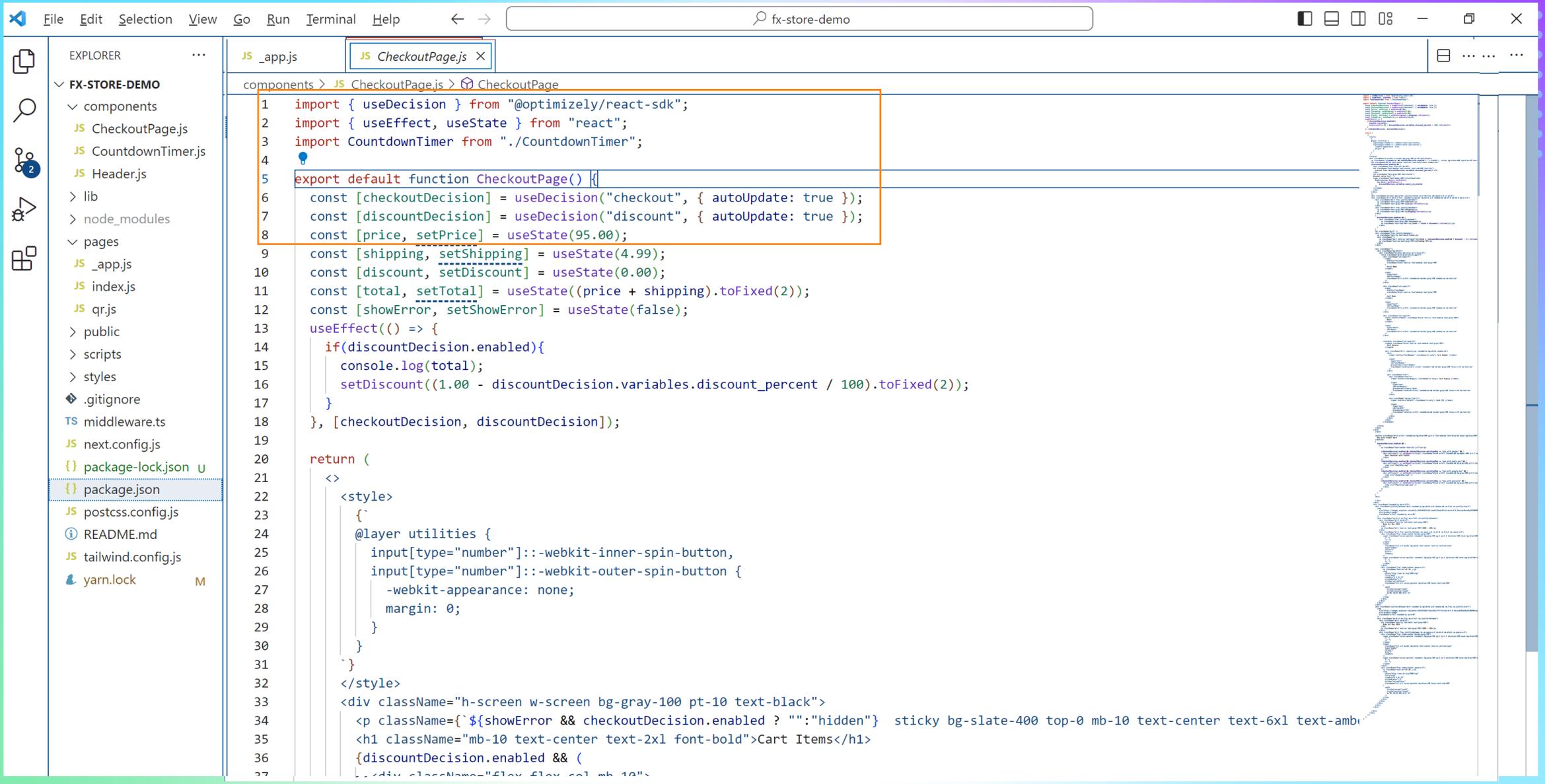
All Flags Exclusion Groups

Flags are decision points in your code and rules are used to run experiments and rollouts.

Find Flags Environment Production Enabled Any Rules Any Archived No [Create New Flag...](#)

Flag	Key	Rules in Production		Enabled in Production	Created	Modified	
<a href="#">New module</a>	new_module	Experiment	1	Yes	Oct 17, 2023	Oct 17, 2023	...
<a href="#">Article settings</a>	article_settings	Experiment Targeted Delivery	1 1	Yes	Aug 23, 2023	Oct 17, 2023	...
<a href="#">Flash Sale</a> Determine impact on the revenue by using a Flash Sale	discount	Experiment	1	Yes	Jul 11, 2023	Oct 27, 2023	...
<a href="#">Checkout Flow</a> Decide on which checkout flow works the best	checkout	Experiment	1	Yes	Jul 11, 2023	Sep 25, 2023	...
<a href="#">Inventory on PDP</a> Flag to either show or hide inventory on the product detail page.	inventory_on_pdp	Experiment Targeted Delivery	1 1	Yes	Jun 8, 2023	Aug 25, 2023	...
<a href="#">User car recommendations</a>	user_car_recommendations	Targeted Delivery	1	Yes	Jun 5, 2023	Jun 6, 2023	...
<a href="#">Show trade car button</a>	show_trade_car_button	Targeted Delivery	1	Yes	Jun 5, 2023	Jun 6, 2023	...
<a href="#">Include car picture</a>	include_car_picture	None		Yes	Jun 5, 2023	Jun 6, 2023	...
<a href="#">New Page design</a>	new_page_design	Experiment	1	Yes	Jun 1, 2023	Jun 1, 2023	...

# Wrap the code in the flag



```
1 import { useDecision } from "@optimizely/react-sdk";
2 import { useEffect, useState } from "react";
3 import CountdownTimer from "./CountdownTimer";
4
5 export default function CheckoutPage() {
6   const [checkoutDecision] = useDecision("checkout", { autoUpdate: true });
7   const [discountDecision] = useDecision("discount", { autoUpdate: true });
8   const [price, setPrice] = useState(95.00);
9   const [shipping, setShipping] = useState(4.99);
10  const [discount, setDiscount] = useState(0.00);
11  const [total, setTotal] = useState((price + shipping).toFixed(2));
12  const [showError, setShowError] = useState(false);
13  useEffect(() => {
14    if(discountDecision.enabled){
15      console.log(total);
16      setDiscount((1.00 - discountDecision.variables.discount_percent / 100).toFixed(2));
17    }
18  }, [checkoutDecision, discountDecision]);
19
20  return (
21    <>
22      <style>
23        {
24          @layer utilities {
25            input[type="number"]::-webkit-inner-spin-button,
26            input[type="number"]::-webkit-outer-spin-button {
27              -webkit-appearance: none;
28              margin: 0;
29            }
30          }
31        }
32      </style>
33      <div className="h-screen w-screen bg-gray-100 pt-10 text-black">
34        <p className={`${showError && checkoutDecision.enabled ? "":"hidden"} sticky bg-slate-400 top-0 mb-10 text-center text-6xl text-amb<
35        <h1 className="mb-10 text-center text-2xl font-bold">Cart Items</h1>
36        {discountDecision.enabled && (
37          <div className="flex flex-col mb-10">
```

**Let's try it out together**



# Set feature Rollout to 15% of traffic

The screenshot shows a feature flag management interface. On the left is a sidebar with navigation icons and a menu. The main content area is titled 'Rules for Production' and shows a flag status of 'On'. A rule is currently defined for 'Production' with a value of 'On'. A large empty area on the right is intended for adding new rules.

Mosey Credit Card  
user\_feedback\_widget  
user\_feedback\_widget

Environments

Production	On
Development	Off

Flag Setup

Variables

Variations

API Values

History

Scheduled Changes **BETA**

Settings

### Rules for Production

Flag **On**

1 Add rules to customize delivery or run an experiment [Add Rule](#)

For everyone in Production

On

[Learn more about interactions between flag rules.](#)

Add a rule to customize delivery or run an experiment

Revert Save

# Rollout to 100%

Mosey Credit Card  
user\_feedback\_widget  
user\_feedback\_widget

Environments

Production	Primary environment	On
Development	Environment	Off

Flag Setup

Variables

Variations

API Values

History

Scheduled Changes **BETA**

Settings

#

Rules for Production Flag **On**

The following rule will be evaluated for all visitors Add Rule

1	Alpha feature launch Rollout - Everyone: On	On ...
---	--	--------

Then, for everyone else

Off

[Learn more about interactions between flag rules.](#)

Configure Targeted Delivery ⏏ ...

Name \* Add description

Alpha feature launch

Key \*

alpha\_feature\_launch

Rule keys cannot be changed after they're created.

Audiences Code Mode

Search and add audiences

Everyone

Ramp Percentage

0% 100%

15 %

Deliver

On

\* Required field

Revert Save

# Setting up an experiment

The screenshot shows a web interface for managing feature flags. On the left is a sidebar with navigation icons and a list of menu items: Environments, Flag Setup, Variables, Variations, API Values, History, Scheduled Changes (with a BETA badge), and Settings. The main content area is titled 'Rules for Production' and shows a flag 'user\_feedback\_widget' that is currently 'On'. Below this, it states 'The following rule will be evaluated for all visitors' and lists one rule: '1 Alpha feature launch' with a rollout of 'Everyone: On'. A dropdown menu for 'Then, for everyone else' is currently set to 'Off'. A large grey box on the right contains the text 'Select a rule to edit'. At the bottom right, there are 'Revert' and 'Save' buttons.

Mosey Credit Card  
user\_feedback\_widget  
user\_feedback\_widget

Environments

Production	Primary environment	On
Development	Environment	Off

Flag Setup

Variables

Variations

API Values

History

Scheduled Changes **BETA**

Settings

## Rules for Production

Flag **On**

The following rule will be evaluated for all visitors

[Add Rule](#)

- 1 Alpha feature launch  
Rollout - Everyone: On

Then, for everyone else

Off

[Learn more about interactions between flag rules.](#)

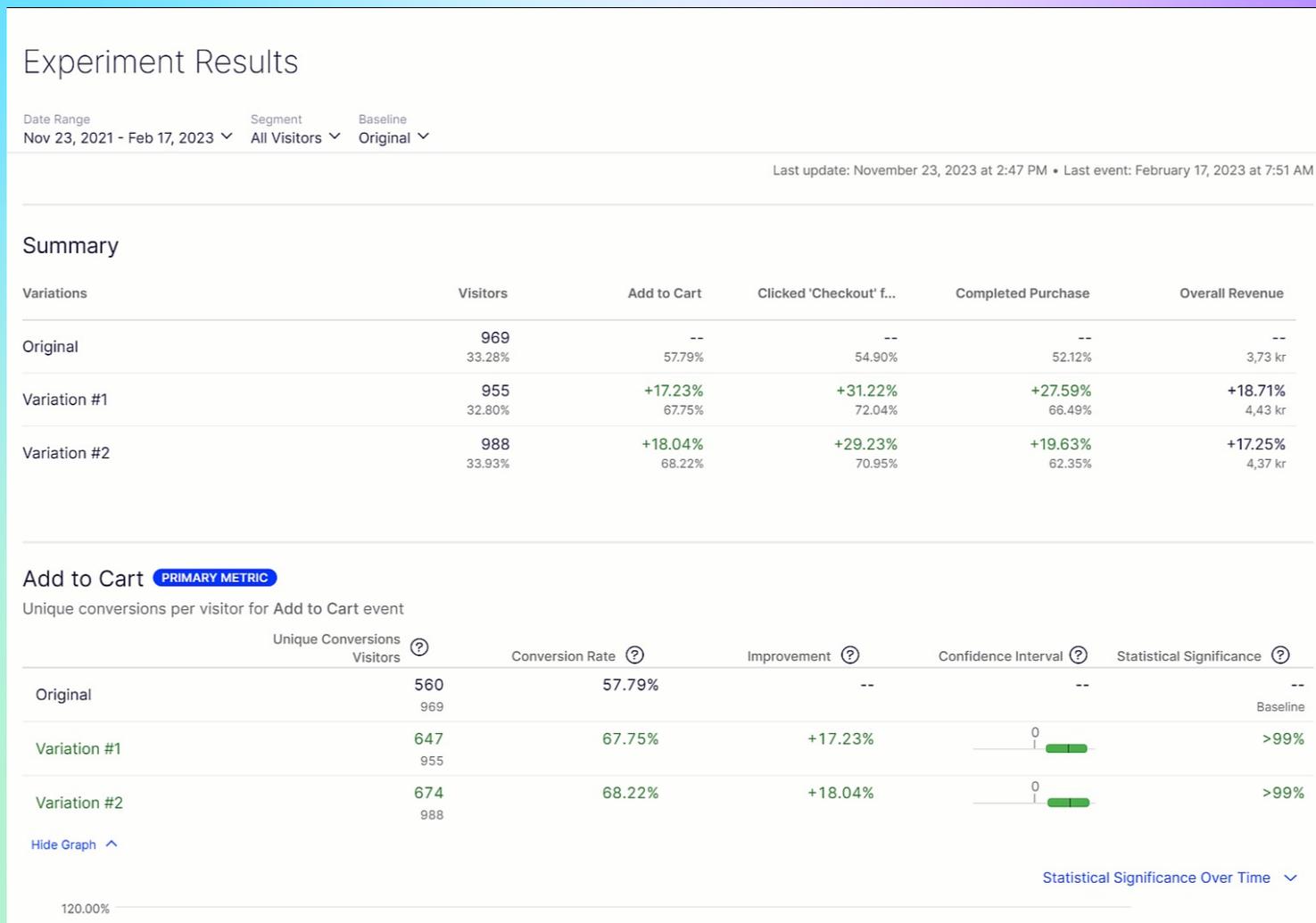
Select a rule to edit

Revert Save

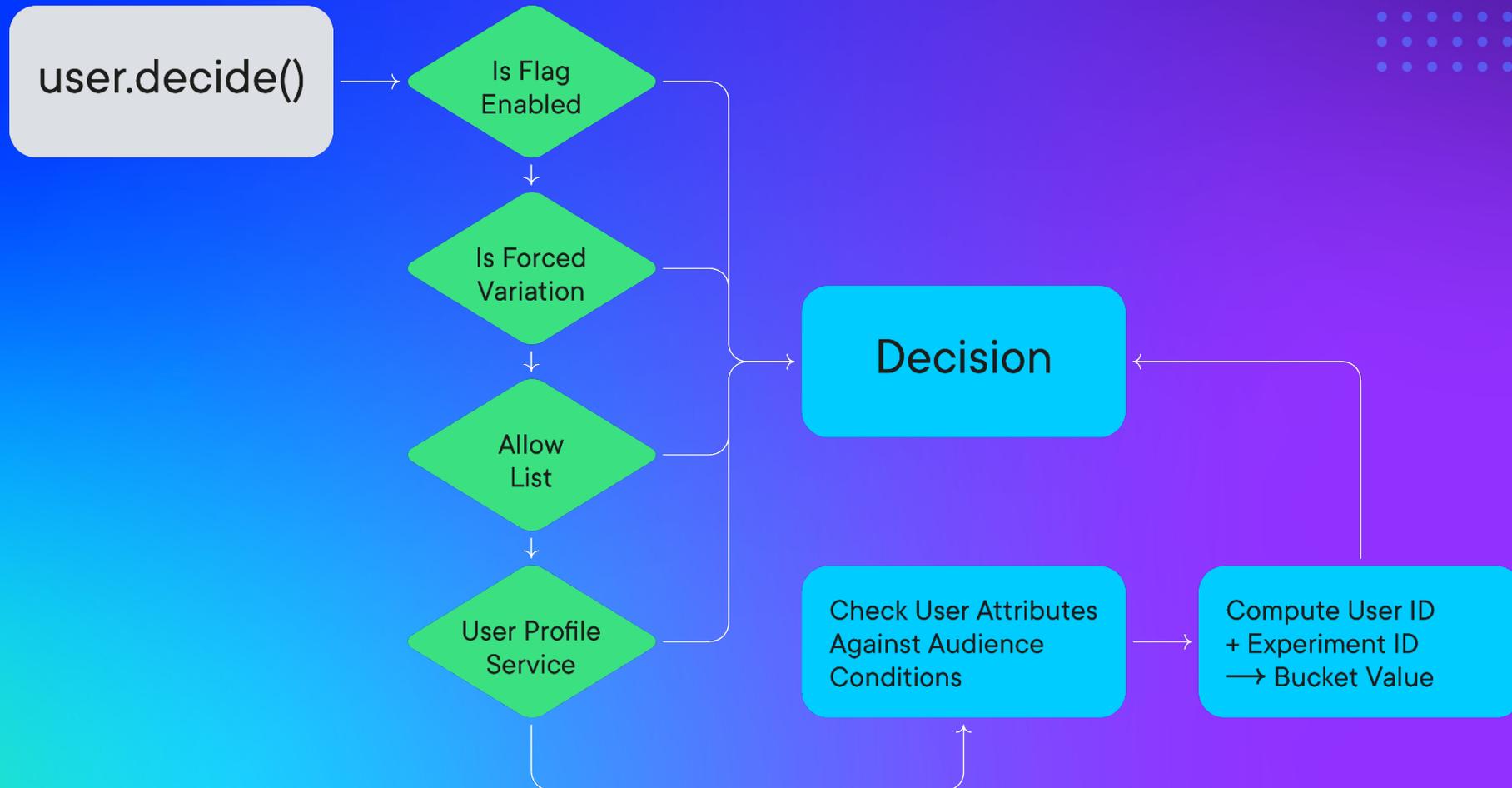
**Let's try it out together again**



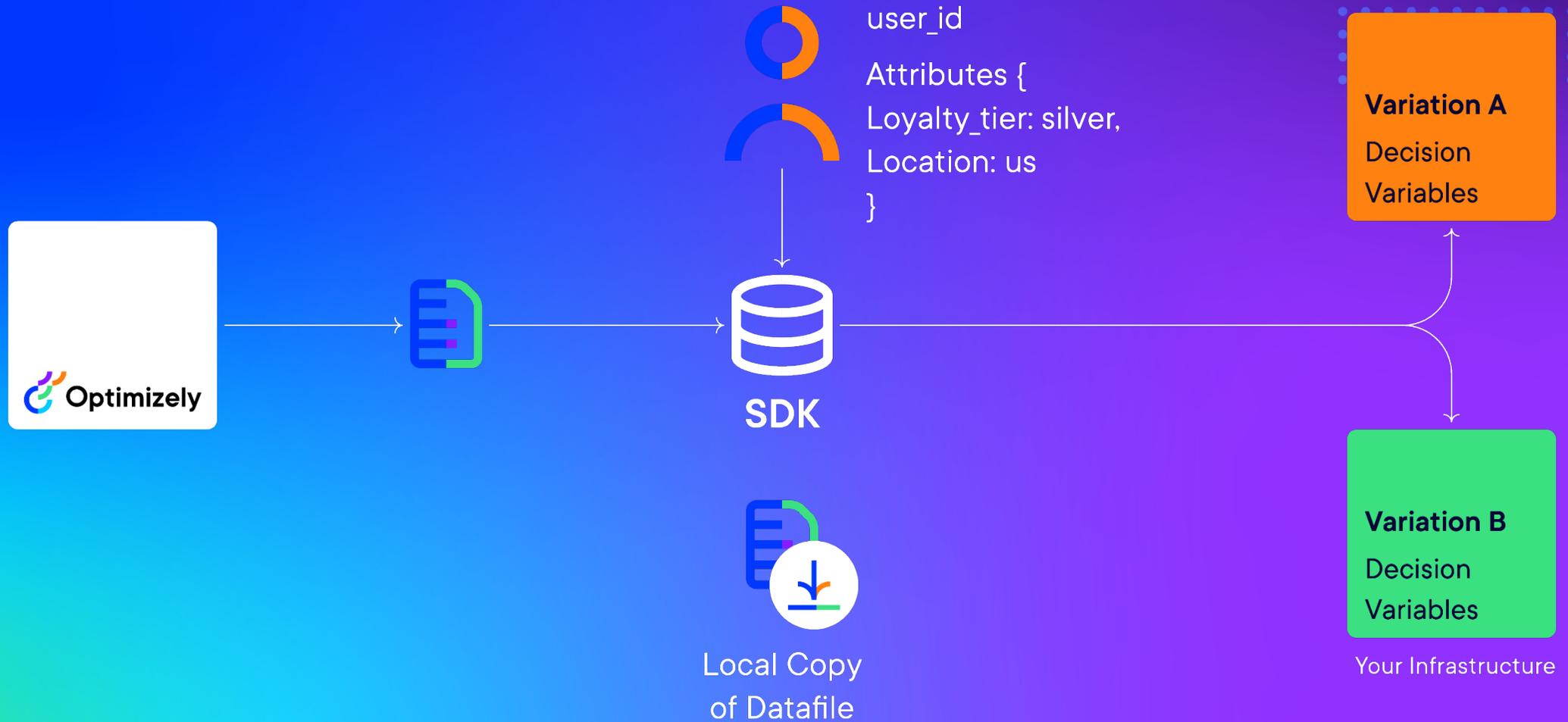
# Analyzing the data



# User Bucketing

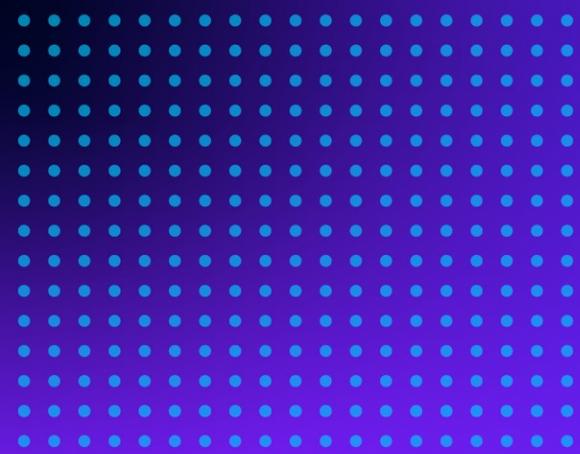


# Data file

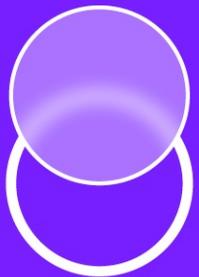


# Q&A





# Thank you!



For additional questions:

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[kunal.shetye@optimizely.com](mailto:kunal.shetye@optimizely.com)

