GOAT-AB

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Brought To You By...
What is AB Testing?
Current Approaches

- Server-side Frameworks
- Client-side Frameworks
- Varying UI/Configuration
- Varying Privacy/Security
Server-Side Problems

Client-Side Problems

The Edge & Serverless
Platform Goals

- Easy Edge Experimentation
- Utilize Edge + Serverless
- Give Fastly a Competitive Edge
- Contribute to Open Source!
C@E (+Goat-AB Crate)

Talks With

Rest API (+SQL + Fastly Database)

Reads Configuration

UI

Developer Implements

Anyone Creates Experiments
Rust Crate

- Rust
- A/B Testing

User Information

Variant (Test)

Selection Function

Experiments/ Variants

UI

Rest API
(+SQL + Fastly Database)

C@E
(+Goat-AB Crate)

Talks With

Anyone Creates Experiments

Developer Implements

Reads Config
REST API

- Go
- Persistent Data Storage
UI

React with Next.js
Project Challenges
Demonstrations
UI Demo
### Cat Button Color
- Red: 50%
- Blue: 50%

### Cat Text
- Buy Today: 50%
- Buy Tomorrow: 50%

### Cat Demo
- Cat1: 20%
- Cat2: 20%
- Cat3: 20%
- Cat4: 20%
- Cat5: 20%
Experiment is active

Name

Variants

Sample Rates

Cat Button Color
Random Selection - Last Updated about 4 hours ago

Red
50%

Blue
50%
Create Experiment

Experiment Name
Give your experiment a memorable name that appears on this dashboard.

Homepage Call To Action Title

Selection Function
This decides the built-in function your experiment will use to select a variant for a user. You may override this in your codebase.

Random Selection

Is Active
This determines if a variant should be selected for this experiment. If disabled, this experiment will not be published to integrations.

Variants
These are the different variations of your experiment.

Add Variant

Create your First Variant
Use the "Add Variant" to add the first option this experiment can choose!
Create Experiment

Experiment Name
Give your experiment a memorable name that appears on this dashboard.

Homepage Call To Action Title

Selection Function
This decides the built-in function your experiment will use to select a variant for a user. You may override this in your codebase.

Random Selection

Is Active
This determines if a variant should be selected for this experiment. If disabled, this experiment will not be published to integrations.

Variant Name
Give your experiment a memorable name that appears on this dashboard.

My Awesome Homepage!

Variant Value
An option's value is a JSON object that defines what your variant looks like to your code.

{"button_color":"red"}

Variant Sample Rate
With a random selection function, this is the relative rate at which this variant will be chosen.

0%

Create your First Variant
Use the "Add Variant" to add the first option this experiment can choose!
Example Demo

Special thanks to Jim Rainville for his video splicing demo!
Buy Some Cat Chow Today!

Variant Names Debug: Cat1, Buy Today, Red,
Buy Some Cat Chow Tomorrow!

Variant Names Debug: Cat3, Buy Tomorrow, Blue,
Thanks for buying some cat food! Variants logged: Cat3, Buy Tomorrow, Blue,
How do I use it? Where is it?

- Private GitHub Repo
- Components Usable with Any Company*

*Currently Edge Dictionary is the only Rest API integration, but that can change with open-source contributions!
Future Work

- Selection Functions
- Authentication/Teams
- Full Analytics Suite + Dashboards
- Other Integrations
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Thank You For Coming!

Questions?
Demo Links

- Example URL: https://solely-endless-glider.edgecompute.app/
- Origin for comparison: http://155.138.165.216/
Extra Slides
Best Practices

➢ Go Dependency Injection
➢ React Component Breakdown
➢ Rust Generic Traits
Gotchas

➢ Borrow
Checkers &
Ownership
➢ Closures with
Generics
How to Work with Serverless Platforms
Working Around Time and Capability Constraints
How to Quickly Become Productive in a New Language and Iterate Quickly (Detailed PRs!)
How to deal with attachment issues

“Everybody dies, everybody’s code gets deleted, every system breaks

-Tyler McMullen (CTO)
CORS
Cross Origin Resource Sharing

blocked by CORS policy: Response to preflight request doesn't pass access control check: No 'Access-Control-Allow-Origin' header is present on the requested resource.
Fastly & AB Testing

Trackable user

Correct test variant for this user

Fastly caches each permutation of your content for each possible set of test values

Fastly chooses buckets for this user and specifies them in the request