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# Flask-Split Documentation

*Release 0.4.0*

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Flask-Split is a Flask extension for [A/B testing](#) your web application. It is a port of Andrew Nesbitt's excellent [Split](#) A/B testing framework to Python and Flask.



# CHAPTER 1

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## Installation

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The easiest way to install Flask-Split is with pip:

```
pip install Flask-Split
```

You will also need Redis as Flask-Split uses it as a datastore. Flask-Split only supports Redis 2.0 or greater.

In case you are on OS X, the easiest way to install Redis is with Homebrew:

```
brew install redis
```

If you are on Ubuntu or other Debian-based Linux, you can install Redis with APT:

```
sudo apt-get install redis-server
```





# CHAPTER 2

## Quickstart

In order to start using Flask-Split, you need to first register the Flask-Split blueprint to your Flask application:

```
from flask import Flask
from flask_split import split

app = Flask(__name__)
app.register_blueprint(split)
```

After that you can start A/B testing your application.

## 2.1 Defining an A/B test

You can define experiments with the `ab_test()` function in a view or a template. For example, in a template you can define an experiment like so:

```
<button type="submit">
  {{ ab_test('signup_btn_text', 'Register', 'Sign up') }}
</button>
```

This will set up a new experiment called *signup\_btn\_text* with two alternatives: *Register* and *Sign up*. The first alternative is the control. It should be the original text that was already on the page and the text you test new alternative against. You should not add only new alternatives as then you won't be able to tell if you have improved over the original or not.

## 2.2 Tracking conversions

To measure how the alternative has impacted the conversion rate of your experiment you need to mark a visitor reaching the conversion point. You can do this with the `finished()` function:

```
finished('signup_btn_text')
```

You should place this in a view, for example after a user has completed the sign up process.

## CHAPTER 3

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### Configuration

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The following configuration values exist for Flask-Split. Flask-Split loads these values from your main Flask config which can be populated in various ways.

A list of configuration keys currently understood by the extension:

**REDIS\_URL** The database URL that should be used for the Redis connection. Defaults to `'redis://localhost:6379'`.

**SPLIT\_ALLOW\_MULTIPLE\_EXPERIMENTS** If set to *True* Flask-Split will allow users to participate in multiple experiments.

If set to *False* Flask-Split will avoid users participating in multiple experiments at once. This means you are less likely to skew results by adding in more variation to your tests.

Defaults to *False*.

**SPLIT\_IGNORE\_IP\_ADDRESSES** Specifies a list of IP addresses to ignore visits from. You may wish to use this to prevent yourself or people from your office from skewing the results.

Defaults to `[]`, i.e. no IP addresses are ignored by default.

**SPLIT\_ROBOT\_REGEX** Flask-Split ignores visitors that appear to be robots or spider in order to avoid them from skewing any results. Flask-Split detects robots and spiders by comparing the user agent of each request with the regular expression in this setting.

Defaults to:

```
r"""
(?:i)\b(
    Baidu/
    Gigabot/
    Googlebot/
    libwww-perl/
    lwp-trivial/
    msnbot/
    SiteUptime/
    Slurp/
```

(continues on next page)

(continued from previous page)

```
WordPress/  
ZIBB/  
ZyBorg  
) \b  
"""
```

**SPLIT\_DB\_FAILOVER** If set to *True* Flask-Split will not let `ab_test()` or `finished()` to crash in case of a Redis connection error. In that case `ab_test()` always delivers the first alternative i.e. the control.

Defaults to *True*.

## CHAPTER 4

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### Web Interface

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Flask-Split comes with a web frontend to get an overview of how your experiments are doing. You can find the web interface from the address `/split/`.

If you would like to restrict the access to the web interface, you can take advantage of blueprint's hooks:

```
from flask import abort
from flask_split import split

@split.before_request
def require_login():
    if not user_logged_in():
        abort(401)
```



This part of the documentation covers all the public classes and functions in Flask-Split.

`flask_split.ab_test(experiment_name, *alternatives)`

Start a new A/B test.

Returns one of the alternatives. If the user has already seen the test, they will get the same alternative as before.

### Parameters

- **experiment\_name** – Name of the experiment. You should never use the same experiment name to refer to a second experiment.
- **alternatives** – A list of alternatives. Each item can be either a string or a two-tuple of the form (alternative name, weight). By default each alternative has the weight of 1. The first alternative is the control. Every experiment must have at least two alternatives.

`flask_split.finished(experiment_name, reset=True)`

Track a conversion.

### Parameters

- **experiment\_name** – Name of the experiment.
- **reset** – If set to *True* current user's session is reset so that they may start the test again in the future. If set to *False* the user will always see the alternative they started with. Defaults to *True*.





Here you can see the full list of changes between each Flask-Split release.

### 6.1 0.4.0 (2018-10-14)

#### 6.1.1 Features

- Added support for Python 3.7. Thanks Angus Pearson.
- Switch from HTTP for loading JQuery from Google to protocol-relative URL. Thanks Angus Pearson.

#### 6.1.2 Bug fixes

- Fixed #7: usage of deprecated `flask.ext` namespace.
- Fixed usage of deprecated `flask.Flask.save_session`.

#### 6.1.3 Breaking changes

- Dropped support for Python 2.6.
- Bumped minimum Flask version to 0.10.
- Bumped minimum Redis version to 2.6.0.

### 6.2 0.3.0 (2015-07-23)

- Fixed #3: `TypeError: set([]) is not JSON serializable` when tracking a conversion in Flask 0.10. Thanks Kacper Wikeł and Nick Woodhams.

- Dropped support for Python 2.5.

## 6.3 0.2.0 (2012-06-03)

- Added `REDIS_URL` configuration variable for configuring the Redis connection.
- Fixed properly `finished()` incrementing alternative's completion count multiple times, when the test is not reset after it has been finished. The fix for this issue in the previous release did not work, when the version of the test was greater than 0.

## 6.4 0.1.3 (2012-05-30)

- Fixed `finished()` incrementing alternative's completion count multiple times, when the test is not reset after it has been finished.

## 6.5 0.1.2 (2012-03-15)

- Fixed default value for `SPLIT_DB_FAILOVER` not being set.

## 6.6 0.1.1 (2012-03-12)

- Fixed user's participation to an experiment not clearing out from their session, when experiment version was greater than 0.
- Fixed `ZeroDivisionError` in alternative's z-score calculation.
- Fixed conversion rate difference to control rendering.
- More sensible rounding of percentage values in the dashboard.
- Added 90% confidence level.
- Removed a debug print from `Experiment.find_or_create()`.

## 6.7 0.1.0 (2012-03-11)

- Initial public release

## CHAPTER 7

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### License

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## A

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