

diff - diff

Difference-in- Differences.

Now in Python.

Up to 2,000x faster than R

```
$ pip install diff-diff
```

diff-diff

DiD in Python

Was Broken

- ✗ Fragmented packages
- ✗ Missing modern methods
- ✗ Slow performance
- ✗ R required for serious work

Researchers deserved better.

diff-diff

Introducing

diff-diff

- + Complete DiD toolkit
- + sklearn-like API
- + All modern methods
- + Blazing fast

One library. Everything you need.

diff-diff

R: 24 minutes

diff-diff: 2.6 seconds

Synthetic DiD

2,234x faster

Basic DiD

18x faster

Callaway-SA

14x faster

Benchmarked at 10K scale vs R packages

diff-diff

Every Method

You Need

Basic DiD / TWFE

Classic 2x2 and panel

Callaway-Sant'Anna

Staggered adoption (2021)

Sun-Abraham

Interaction-weighted (2021)

Synthetic DiD

Arkhangelsky et al. (2021)

Triple Difference

DDD with proper covariates

Honest DiD

Rambachan-Roth sensitivity



diff-diff

Clean, Pythonic API

```
from diff_diff import CallawaySantAnna

# Staggered DID in 5 lines

cs = CallawaySantAnna( )

results = cs.fit(
    data,
    outcome='sales',
    unit='firm_id',
    time='year',
    first_treat='first_treat'
)

results.print_summary()
```

sklearn-like fit() + statsmodels-style output

diff-diff

Validated. Trusted.

Production-Ready.

Comparison

Result

Point estimates vs R

Identical (10+ decimals)

Standard errors

Within 1-3%

R packages tested

did, synthdid, fixest

Real-world validation

MPDTA dataset



Academic-grade accuracy. No compromises

diff-diff

Everything

Included

* Robust & Cluster SEs

* Wild Bootstrap

* Event Study Plots

* Parallel Trends Tests

* Bacon Decomposition

* Power Analysis

* Pre-trends Power

* Placebo Tests

Publication-ready visualizations included

diff-diff

Built for

Researchers



Applied Economists



Policy Researchers



Data Scientists

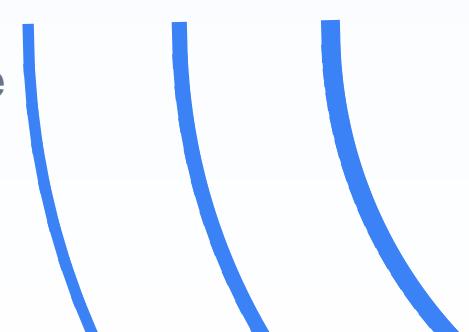


Python-First Teams



Finally escape R for causal inference

diff-diff



Get Started in 30 Seconds

```
$ pip install diff-diff
```

github.com/igerber/diff-diff

Full documentation & tutorials included

MIT Licensed | Open Source

diff-diff

Difference-in-Differences for Python

