

# Why do projects fail?

Let's talk about the story of  
Sinon.PY

Kir Chou @ pycon 2017

For any level audiences  
slightly subjective experience sharing

# Who am I?

Kir Chou

- Full-stack web application engineer
- Python with less than 3 years experience



Let's think about another thing...

Why do projects fail?

**What do the community need?**

Let's talk about the story of  
**Sinon.PY**

Since 2016 Oct.

Every projects must have a  
**Motivation**

# Python unittest.mock

```
>>> from unittest.mock import MagicMock
>>> thing = ProductionClass()
>>> thing.method = MagicMock(return_value=3)
>>> thing.method(3, 4, 5, key='value')
3
>>> thing.method.assert_called_with(3, 4, 5, key='value')
```

```
>>> mock = Mock(side_effect=KeyError('foo'))
>>> mock()
Traceback (most recent call last):
...
KeyError: 'foo'
```

```
>>> values = {'a': 1, 'b': 2, 'c': 3}
>>> def side_effect(arg):
...     return values[arg]
...
>>> mock.side_effect = side_effect
>>> mock('a'), mock('b'), mock('c')
(1, 2, 3)
>>> mock.side_effect = [5, 4, 3, 2, 1]
>>> mock(), mock(), mock()
(5, 4, 3)
```

# Javascript Sinon.JS

`spy.callCount`

The number of recorded calls.

`spy.called`

`true` if the spy was called at least once

- [Spies](#)
- [Stubs](#)
- [Mocks](#)
- [Fake timers](#)
- [Fake XHR and server](#)
- [JSON-P](#)
- [Assertions](#)
- [Matchers](#)
- [Sandboxes](#)
- [Utils](#)

`spy.notCalled`

`true` if the spy was not called

`spy.calledOnce`

`true` if spy was called exactly once

`spy.calledTwice`

`true` if the spy was called exactly twice

`spy.calledThrice`

`true` if the spy was called exactly thrice

`spy.firstCall`

The first call

`spy.secondCall`

The second call

Ugly interface and difficult to use

Hard to understand

Unfriendly document for beginner

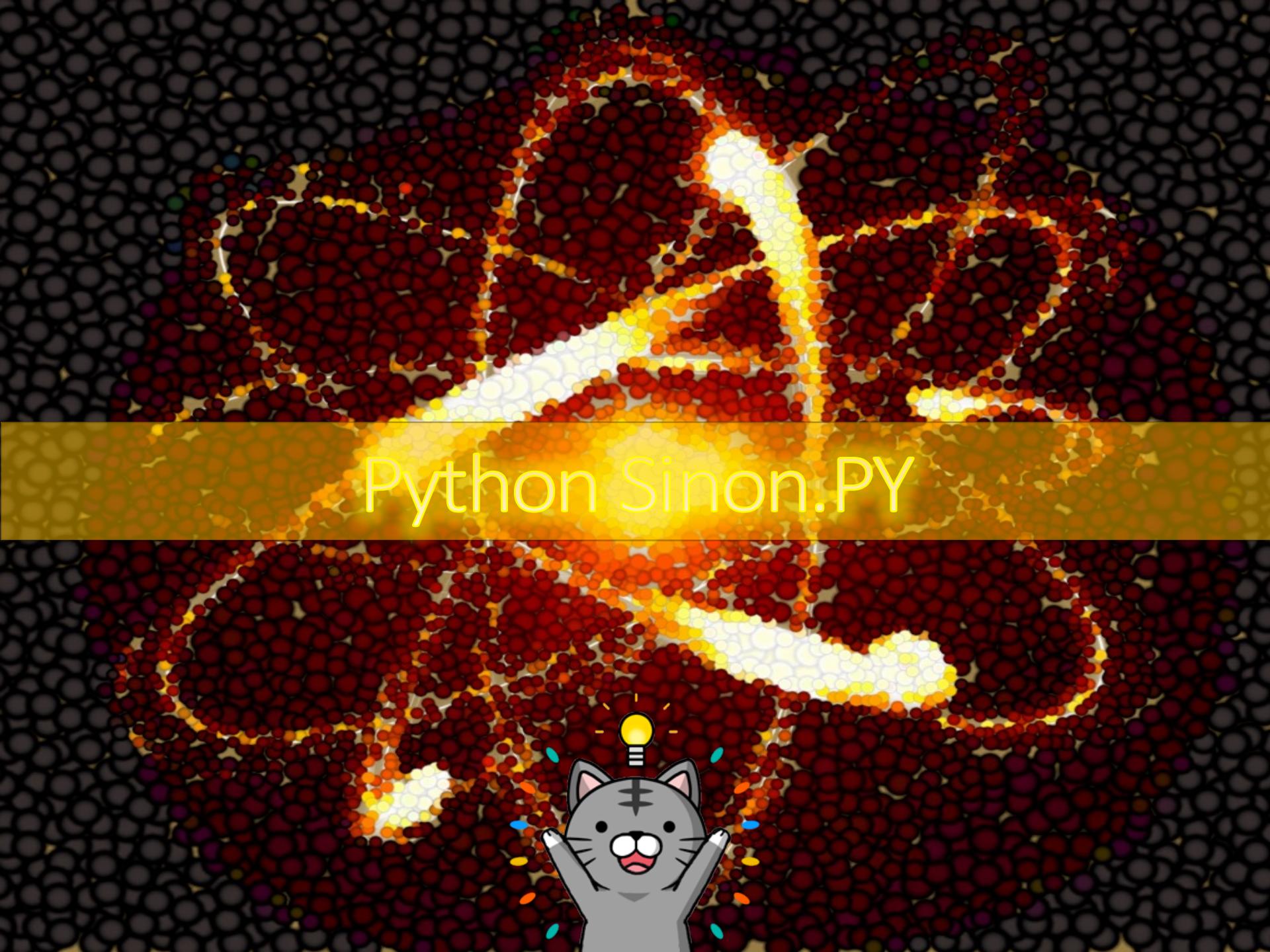
Python unittest.mock

Javascript Sinon.JS

Nice interface and easy to use

Relatively clear to understand

Friendly document for beginner



Python Sinon.PY



# Demo

# Schedule

Oct – Researched

Nov – Prototyping

Dec – Developed Core

Jan – Refined Core with Testcase

Feb – Made API Documentation

# Footprints in the sand show where one has been

## Silly question on StackOverflow forced-assign-value-to-function-call

```
>>> import os
>>> print(getattr(os, "system"))
<built-in function system>

>>> setattr(os, "system") = "a"
      File "<stdin>", line 1
SyntaxError: can't assign to function call
```

Is that possible to achieve this?

python

python-3.x



# Footprints in the sand show where one has been

## Silly question on StackOverflow

### forced-assign-value-to-function-call

```
>>> import os
>>> print(getattr(os, "system"))
<built-in function system>

>>> setattr(os, "system") = "a"
      File "<stdin>", line 1
SyntaxError: can't assign to function call
```

```
>>> import os
>>> os_system = os.system
>>> setattr(os, 'system', 'a')
>>> getattr(os, 'system')
'a'
```

# Researched and Prototyping

## Python Core

- get/set/hasattr...
- reload
- weakref

## Open Source

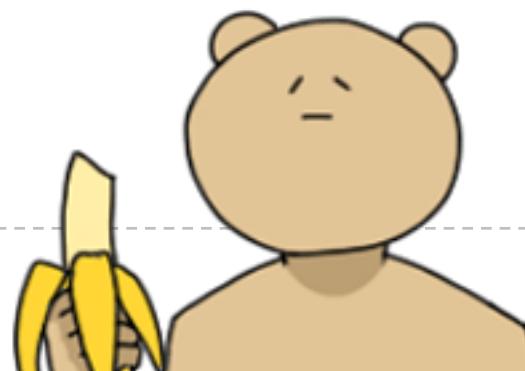
- PyPI
- Travis CI
- Coverage
- Sphinx
- Pylint

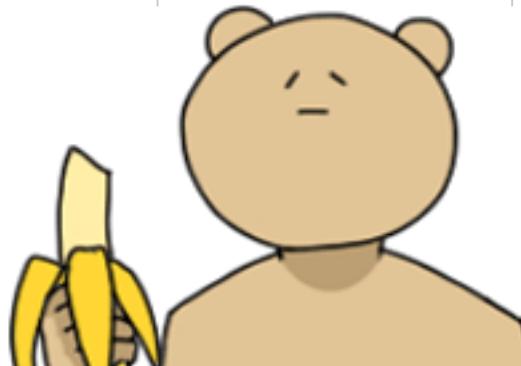
## Python OOD/P

- descriptor, decorator

# Feedback form community?

- Click to add text





# Python

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 search

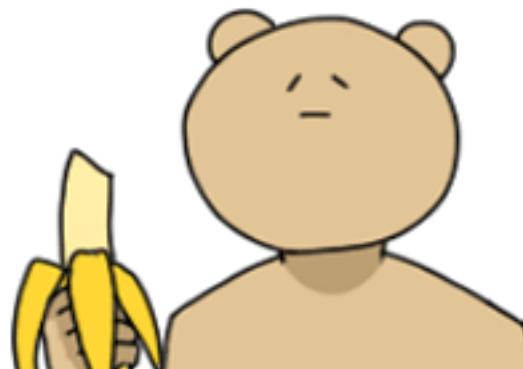


this post was submitted on 21 Feb  
2017

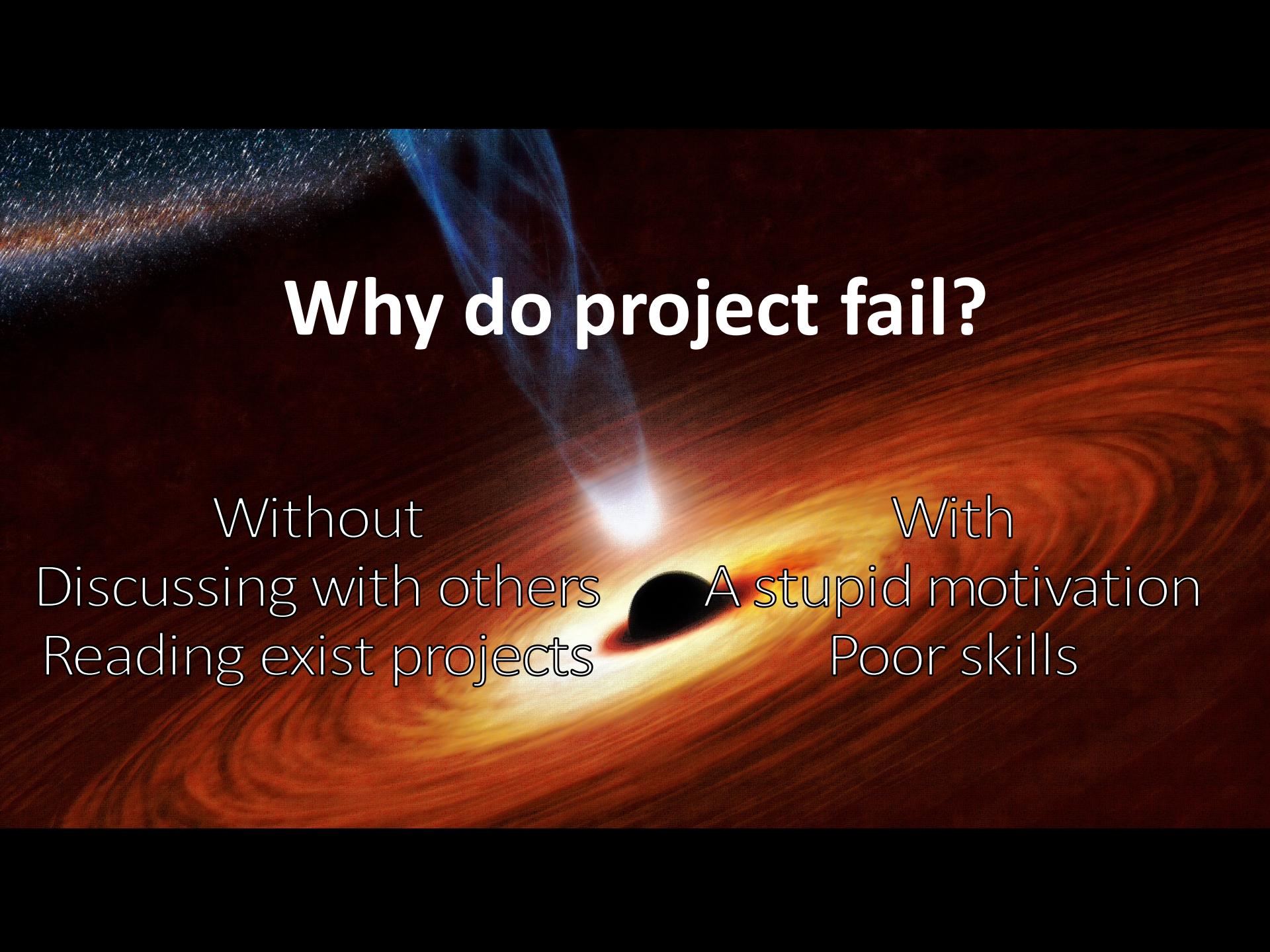
**4 points** (74% upvoted)

shortlink: <https://redd.it/5v9rou>

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# Why do project fail?

A black hole with a bright accretion disk and a blue jet against a dark background.

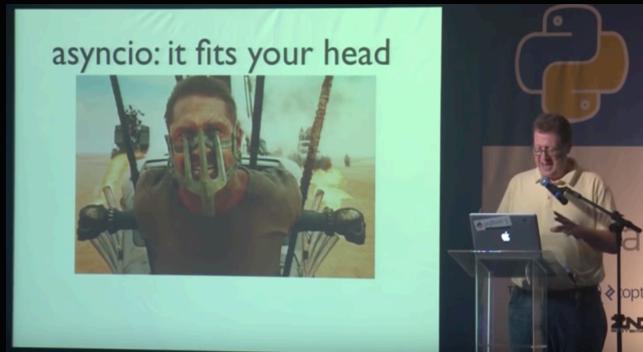
Without

Discussing with others  
Reading exist projects

With

A stupid motivation  
Poor skills

<https://www.youtube.com/watch?v=ZzfHjytDceU>



# What do the community need?

{ Python }

# Before implementing your idea

1. Reading exist projects
2. Discussing with experienced pythonist

# Principle

Don't reinvent the wheel

If there is a car, learning how to drive it

# Provisos

Don't reinvent the wheel

If there is a car, learning how to drive it

You plan on learning more about the wheels

The project has a strong and experienced team

**Don't be afraid of joining the  
communities**

# Q&A