

Observers in the



Wild







**Alexia McDonald**



## **Observations in the Wild**

**Rails Israel 2016 Conference, Monday,  
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In a dynamic language environment working on an app with less than 100% test coverage developers can find themselves in a predicament where they don't know what changes the state of objects.

My talk will be about how to find those changes using the observer pattern that isn't widely used in modern Rails.

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Totally bragging...



# I'm Alexia

@TheSpacePony

- Work @ DoneSafe
- I ❤️ coding
- Coding is hard...







***You mock my pain.***

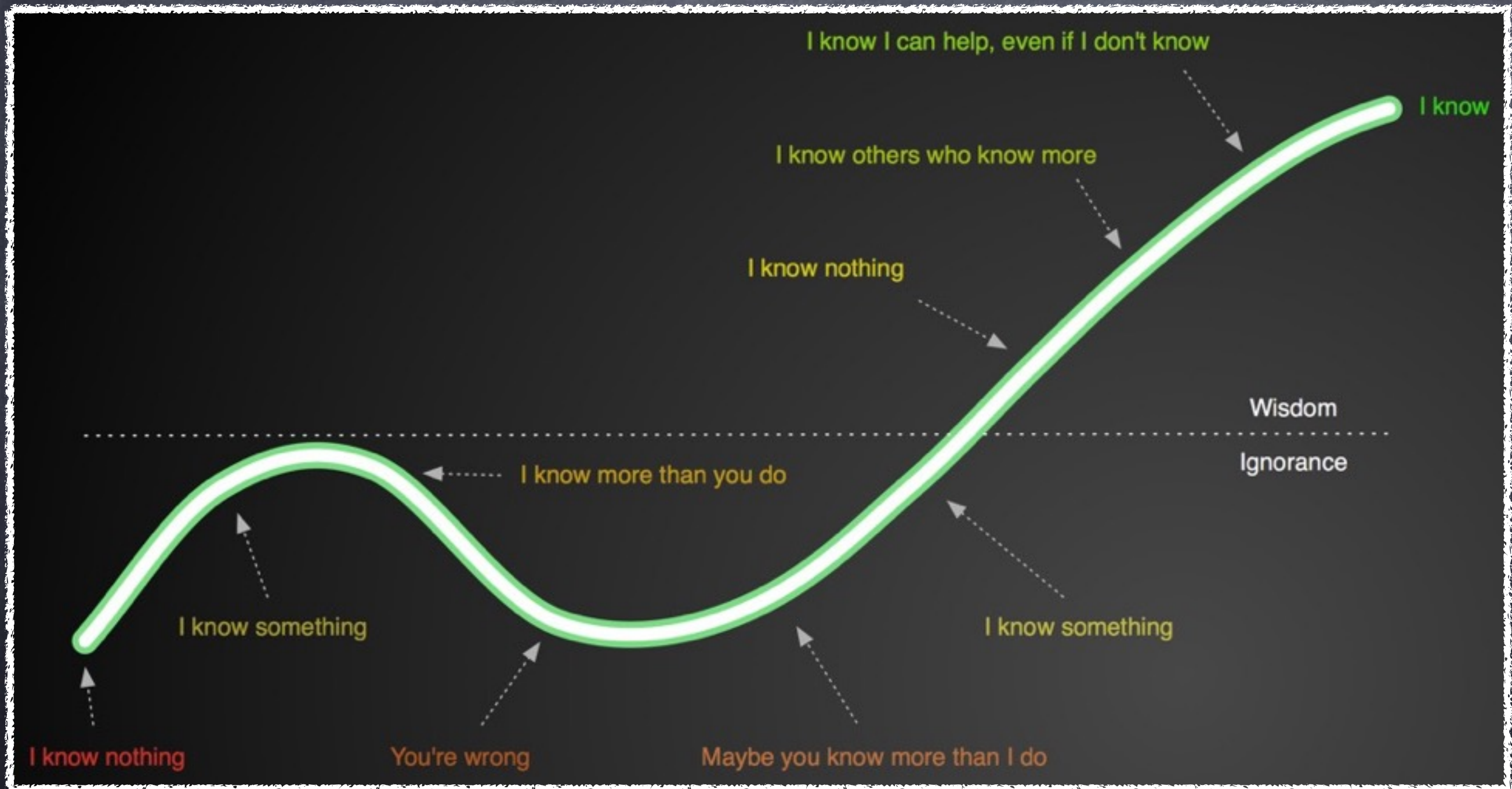




*Life is pain, Highness.*



# One thing I do know is... Observers







**SEE  
SO** | THE IT CROWD  
EVERY EPISODE



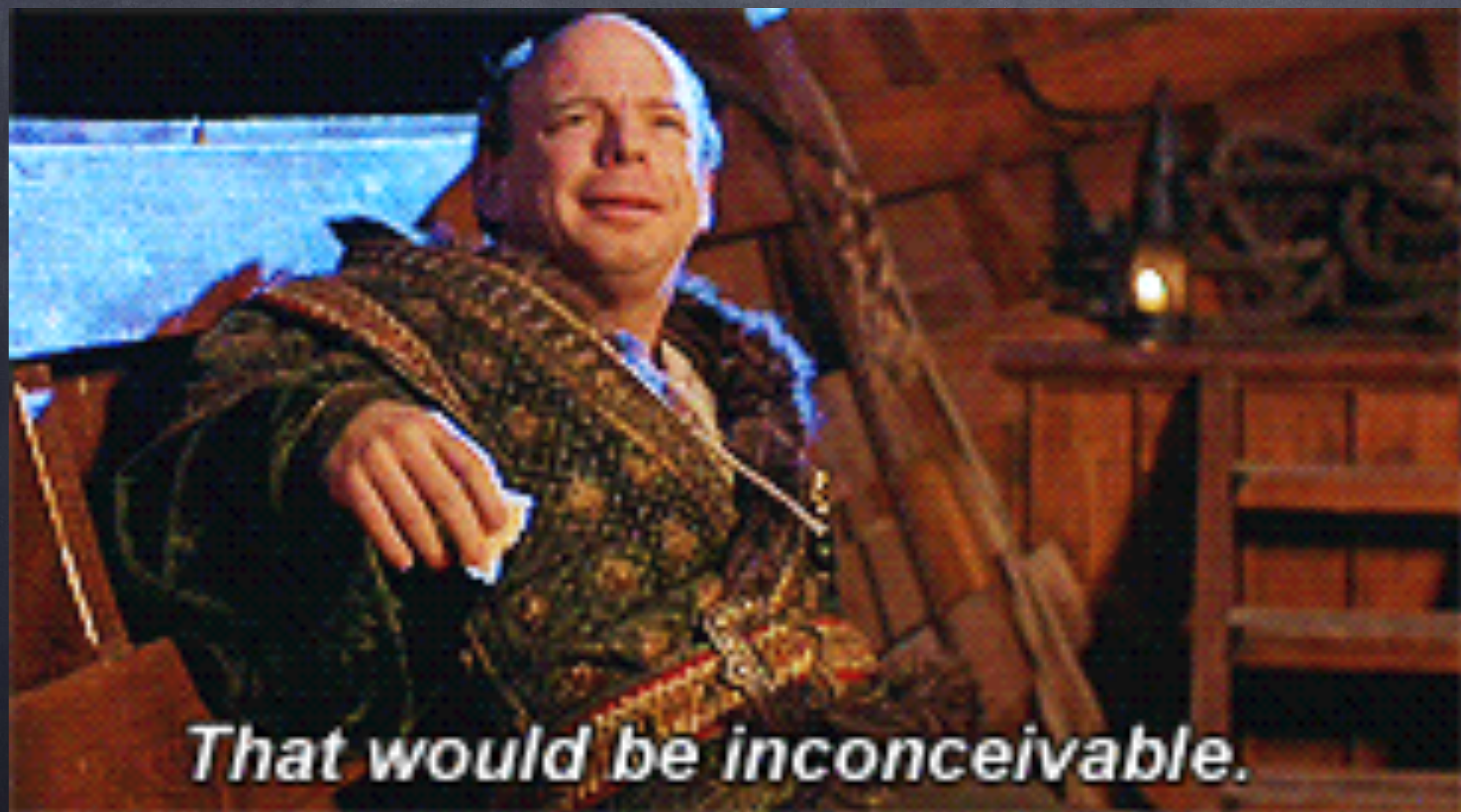
# Observers...

## What are they?

- A piece of code that watches for other code to do stuff you may or may not expect!







*That would be inconceivable.*



# Plan before you code

- What do you want to monitor?
- What patterns do you need to watch for?
- How do you want to be notified?



# Princess Bride, really?



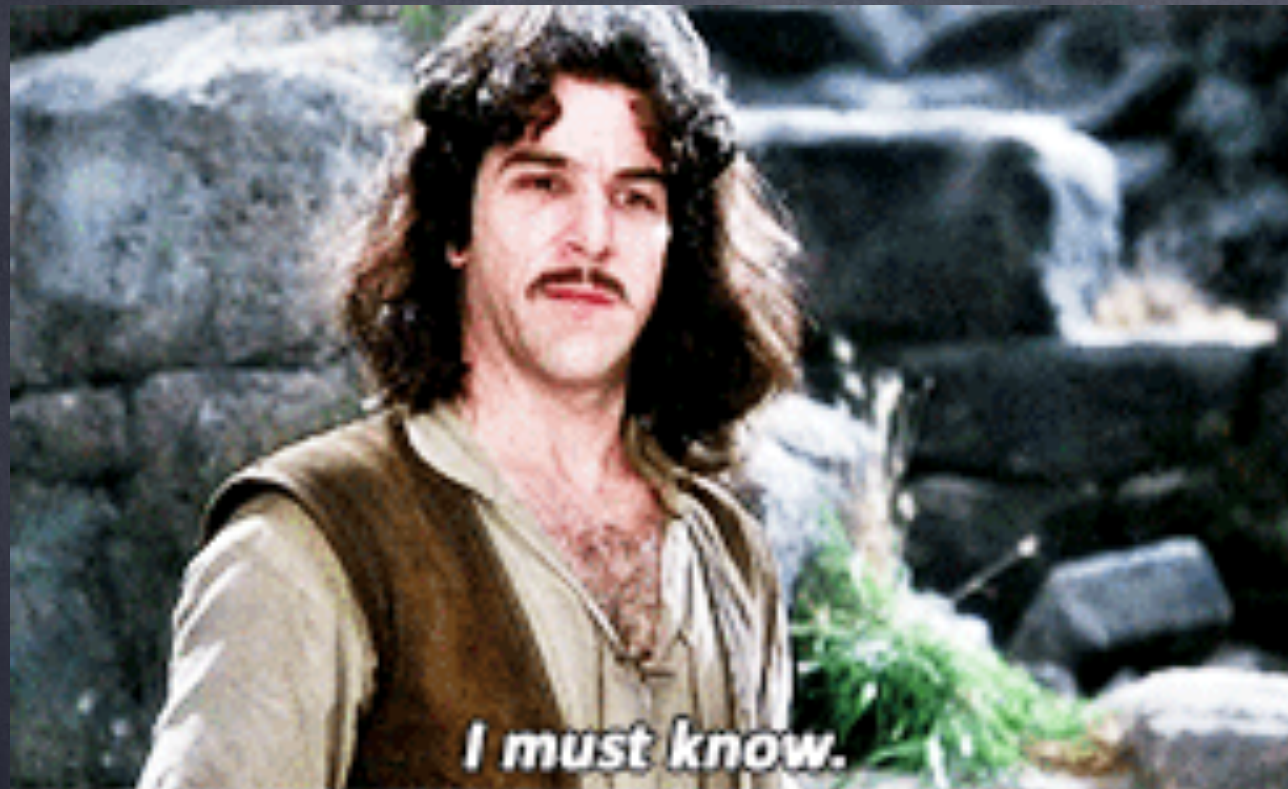
I don't think they exist.







# Problem?



- Inigo Montoya's father was killed
- He wants vengeance
- He can't find the man who killed his father
- Helps Wesley storm castle to find Buttercup



# Inigo Montoya

```
1  class InigoMontoya
2      LOOKING_FOR_SIX_FINGERED_MAN = true
3
4      def self.intrude_into_castle
5          puts 'awesome code here'
6      end
7  end
8
```



What do we want  
to monitor?







# What do we know?

- Really likes swords
- Sucks life away
- Scars children
- Has 6 fingers
- Looks for intruders storming the castle





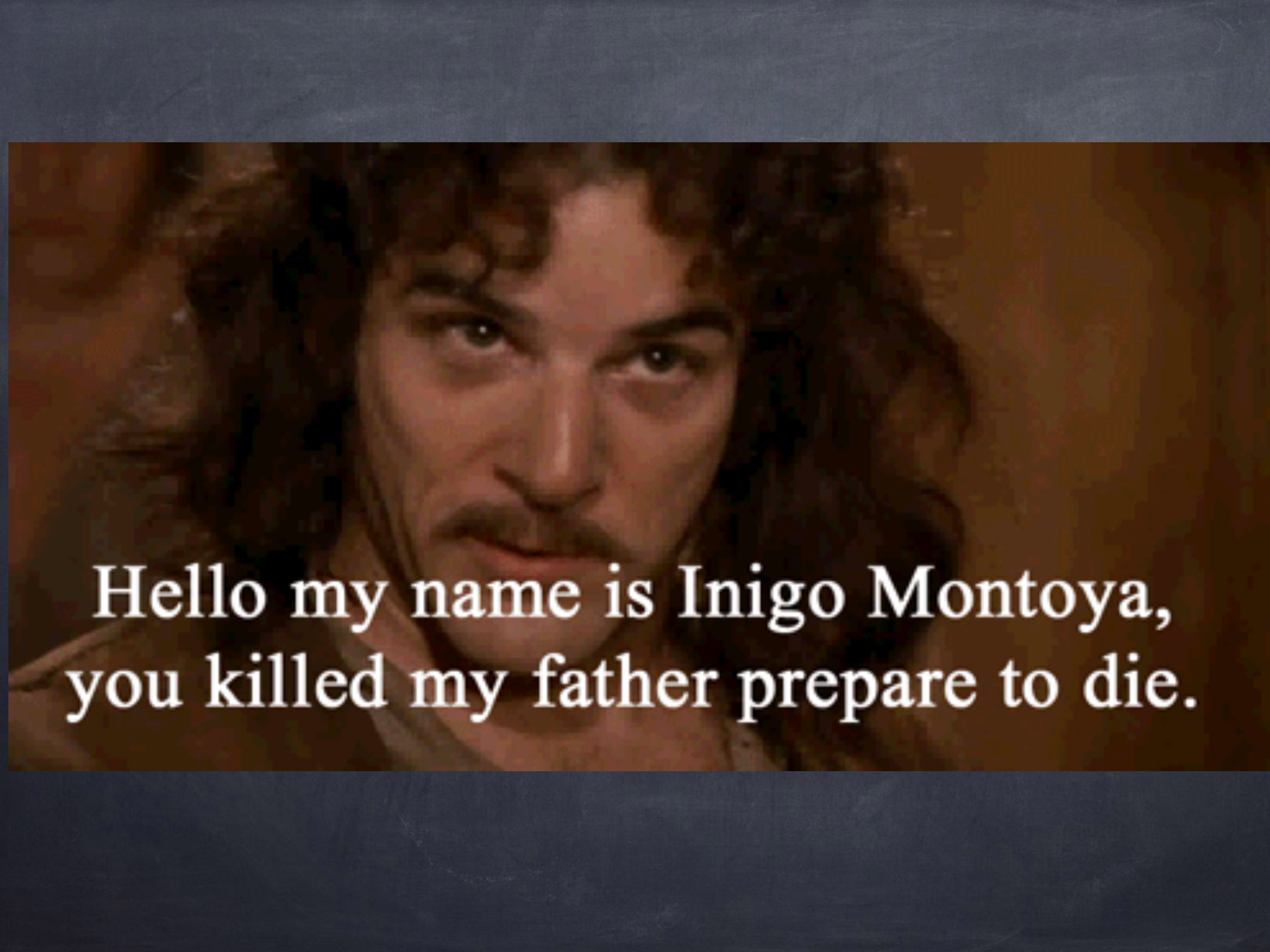
# Count Rugen

```
1  class CountRugen
2
3      def self.has_six_fingers
4          @@has_six_fingers
5      end
6
7      def self.find_intruders
8          @@has_six_fingers = true
9      end
10 end
11
```



How do we want to  
solve it?



A close-up portrait of Inigo Montoya, played by Mandy Patinkin, from the 1988 film 'The Princess Bride'. He has long, dark, curly hair and a mustache, looking directly at the camera with a serious expression. The background is a warm, brownish-gold color.

Hello my name is Inigo Montoya,  
you killed my father prepare to die.



Raise error so we can  
go bug squashing!





# Add Gem to Gemfile

```
50  gem 'rubyzip'
51  gem 'rails-observers' #TODO: Need to remove at some point...
52
```







Run Bundle... to  
install it

\$ bundle



# Movie with a plot

```
1 class Movie < ActiveRecord::Base
2
3   def plot
4     InigoMontoya.intrude_into_castle
5     CountRugen.find_intruders
6   end
7 end
8
```







# Callbacks

The hooks for tying  
the whole thing  
together!

## 3.1 Creating an Object

- before\_validation
- after\_validation
- before\_save
- around\_save
- before\_create
- around\_create
- after\_create
- after\_save
- after\_commit/after\_rollback

## 3.2 Updating an Object

- before\_validation
- after\_validation
- before\_save
- around\_save
- before\_update
- around\_update
- after\_update
- after\_save
- after\_commit/after\_rollback

## 3.3 Destroying an Object

- before\_destroy
- around\_destroy
- after\_destroy
- after\_commit/after\_rollback



Time to create our  
observer!





# Observer

```
class VengeanceObserver < ActiveRecord::Observer
  observe :movie

  def after_create(movie)
    if InigoMontoya::LOOKING_FOR_SIX_FINGERED_MAN && CountRugen.has_six_fingers
      Rails.logger.error "#{movie.inspect} killed Inigo Montoya's father."
      raise "Hello My Name is Inigo Montoya. You killed my father prepare to die!"
    end
  end
end
```

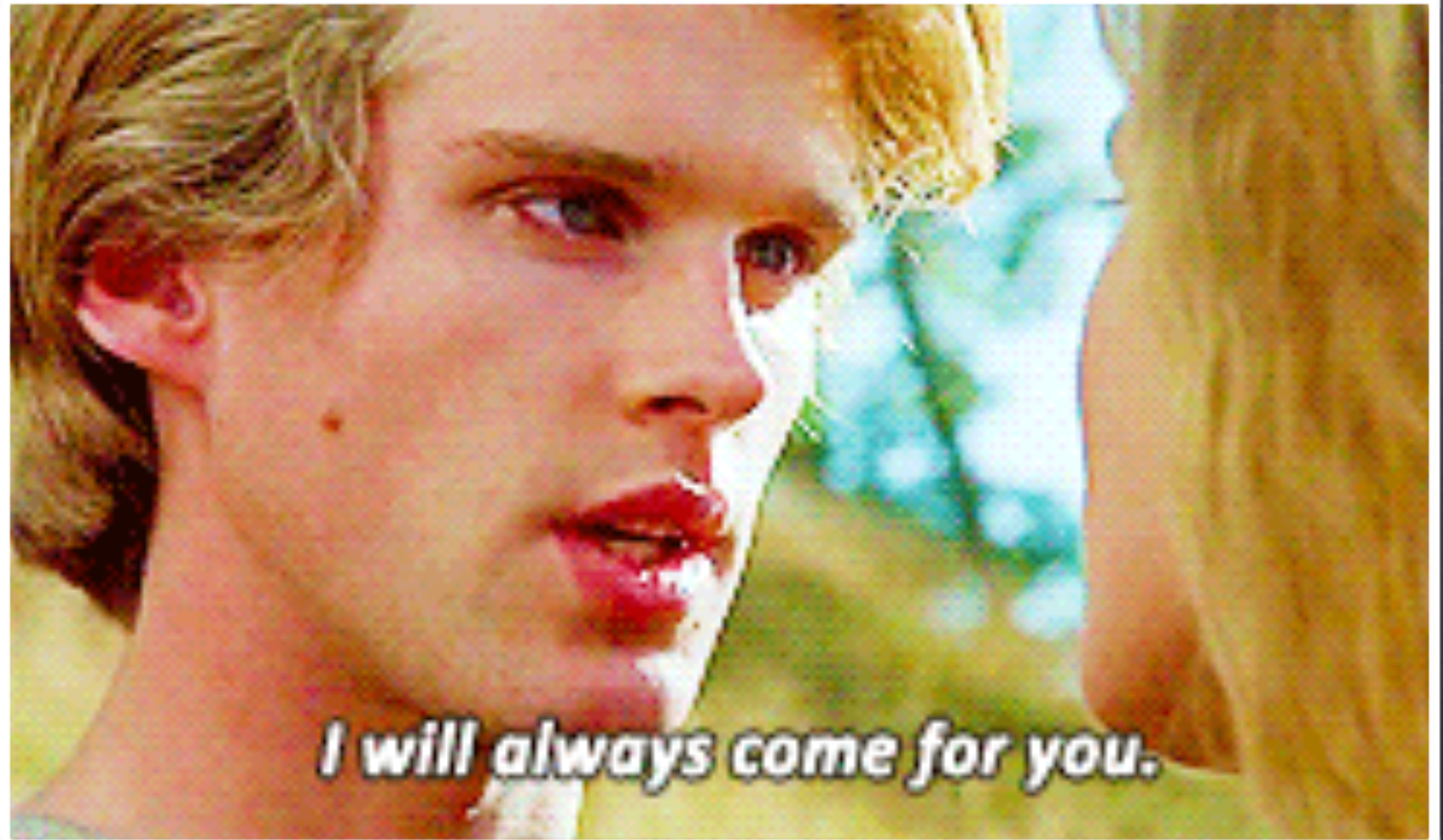






"Nope"





*I will always come for you.*



# Add this to application.rb

```
# TODO: Remove him after your done  
config.active_record.observers = :vengeance_observer
```





**As you wish.**



Time to run our  
code!





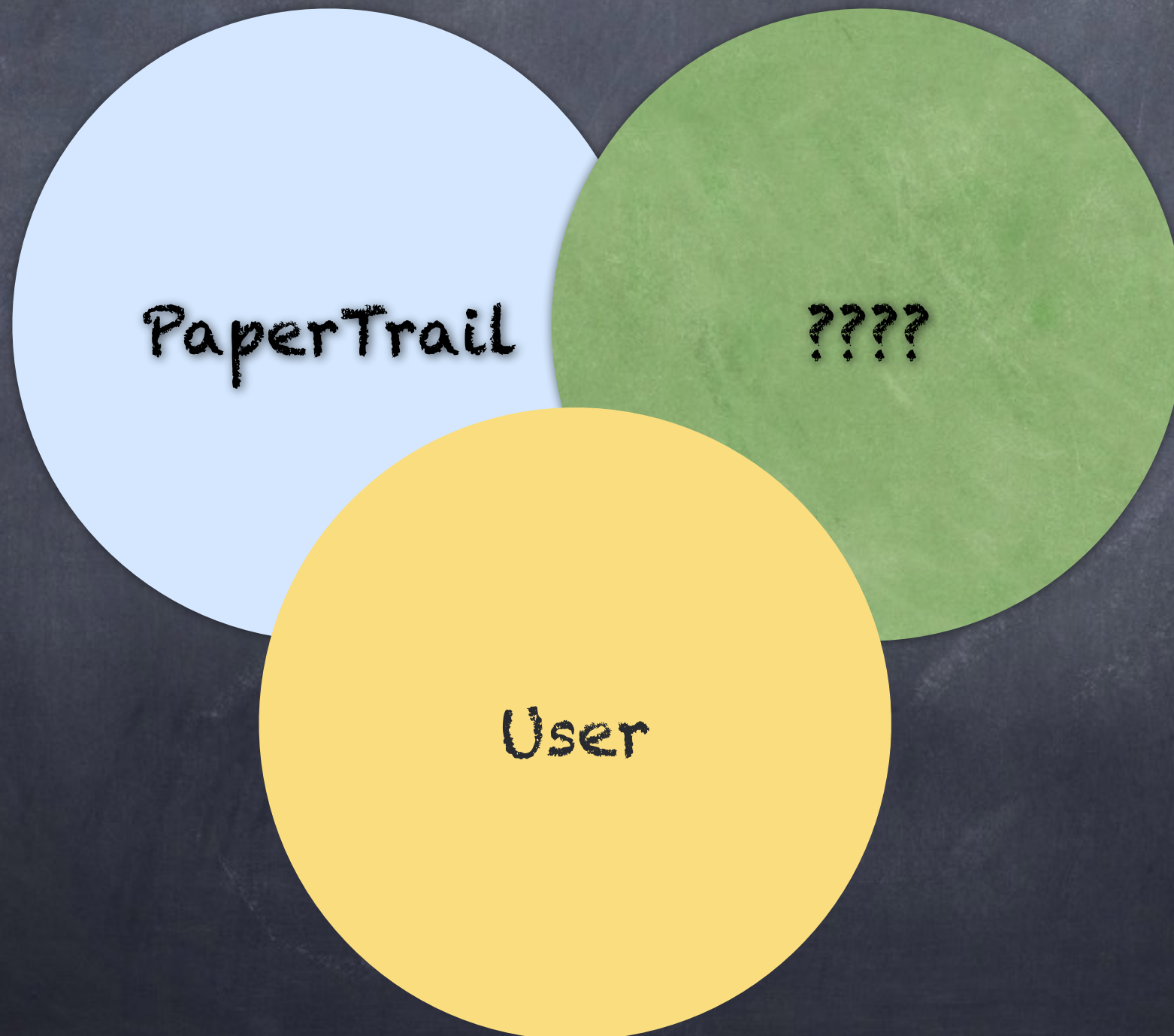




Live demo time!



# Problem I've come across





# Criticisms

- Performance slowdown
- It's a workaround
- Called in order that they are defined
- Mystery Behaviour



