

Metrics Magic

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Code quality

Code coverage

Code complexity

Code duplication

Why do I care?

Maintainability

Testability

Refactoring

Sanity

```
def start_new_page(options = {})
  if last_page = page
    last_page_size      = last_page.size
    last_page_layout   = last_page.layout
    last_page_margins = last_page.margins
  end

  self.page = Prawn::Core::Page.new(self,
    :size    => options[:size] || last_page_size,
    :layout  => options[:layout] || last_page_layout,
    :margins => last_page_margins )

  apply_margin_option(options) if options[:margin]

  [:left,:right,:top,:bottom].each do |side|
    if margin = options["#{side}_margin"]
      page.margins[side] = margin
    end
  end

  generate_margin_box

  update_colors
  undash if dashed?

  unless options[:orphan]
    pages.insert(@page_number, page)
    @store.pages.data[:Kids].insert(@page_number, page.dictionary)
    @store.pages.data[:Count] += 1
    @page_number += 1
  end

  save_graphics_state

  canvas { image(@background, :at => bounds.top_left) } if @background
  @y = @bounding_box.absolute_top

  float do
    @on_page_create_callback.call(self) if @on_page_create_callback
  end
end
end
```

reek

gem install reek

reek [options] [files]

reek finds code
smells

roodi

gem install roodi

roodi [pattern]

Roodi finds code/ design smells

Flog

Flog scores your code

The higher the
score, the “worse”
your code is

gem install flog

flog [pattern]

Flay

gem install flay

flay [pattern]

Why do I need 4 quality tools?

There's no substitute
for peer review

RCov

gem install rcov

DEMO

Cool, so what do I
do with all this ?

Continuous Integration

You can make these
tools fail the build!

**But wait! There's
more!**

metric-fu

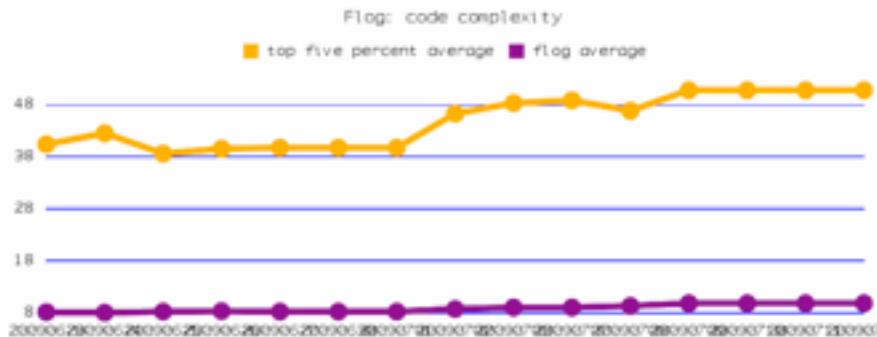
metric-fu includes

- flog
- flay
- reek
- rcov
- saikuro
- and a few more

And wraps them in a
nice pretty picture

Flog Results

Flog measures code complexity.



Total Flog score for all methods: 1566.3

Average Flog score for all methods: 10.2

| File | Total score | Methods | Average score | Highest score |
|---|-------------|---------|---------------|---------------|
| db/geometry.rb | 80 | 1 | 80 | 80 |
| app/models/user.rb | 119 | 9 | 13 | 57 |
| spec/controllers/users_controller_spec.rb | 44 | 7 | 6 | 44 |

Source Control Churn Results

Files that change a lot in your project may be bad a sign. This task uses your source control log to identify those files.

| File Path | Times Changed |
|---|---------------|
| Rakefile | 24 |
| db/schema.rb | 21 |
| app/models/user.rb | 19 |
| spec/models/user_spec.rb | 17 |
| spec/controllers/users_controller_spec.rb | 17 |
| config/environment.rb | 17 |
| app/views/layouts/application.html.haml | 17 |
| lib/importers/events/eventful_importer.rb | 15 |

Rake Stats Results

Rails rake stats results.

| Lines of Code | Lines of Test | Code to test ratio |
|---------------|---------------|--------------------|
| 1089 | 1264 | 11:2 |

| Name | Lines | LDC | Classes | Methods | Methods per class | LDC per method |
|------------------|-------|------|---------|---------|-------------------|----------------|
| Controllers | 275 | 217 | 11 | 30 | 2 | 5 |
| Helpers | 148 | 79 | 0 | 10 | 0 | 5 |
| Models | 289 | 219 | 50 | 24 | 2 | 7 |
| Libraries | 804 | 574 | 4 | 73 | 18 | 5 |
| Model specs | 642 | 531 | 0 | 1 | 0 | 529 |
| Controller specs | 636 | 630 | 1 | 7 | 7 | 73 |
| Helper specs | 212 | 184 | 0 | 0 | 0 | 0 |
| Library specs | 24 | 19 | 0 | 1 | 0 | 17 |
| Total | 3030 | 2353 | 26 | 146 | 5 | 14 |

Saikuro Results

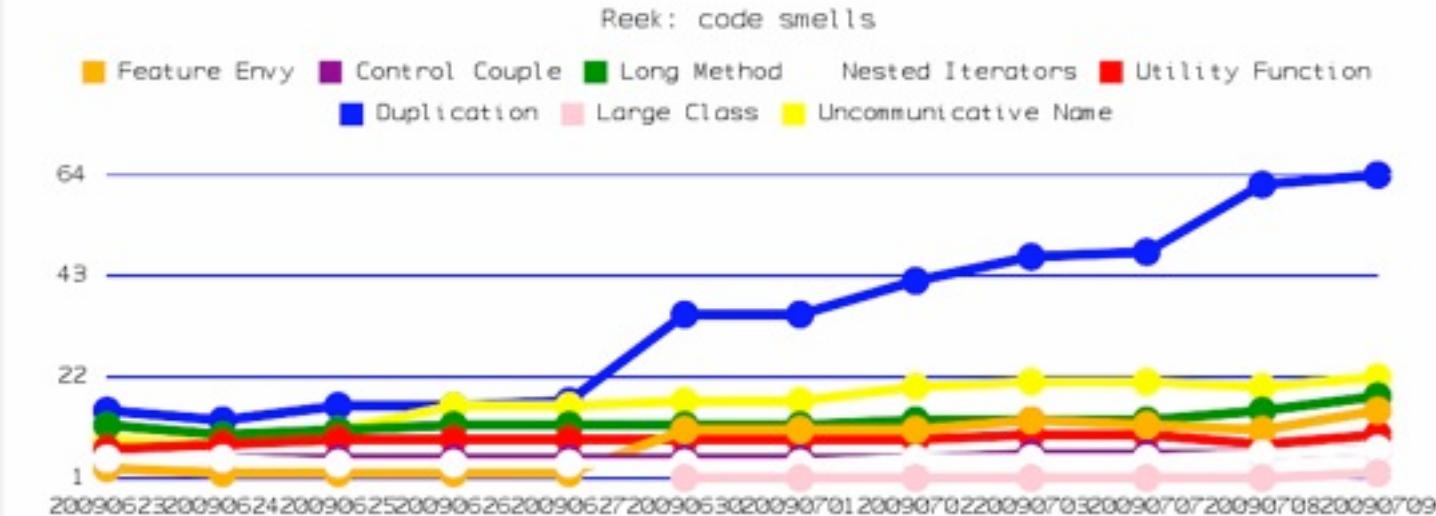
Saikuro analyzes ruby code for cyclomatic complexity.

Analyzed Methods

| Method Name | Complexity | # Lines |
|---|------------|---------|
| PottyMouth::ClassMethods#word_pattern | 15 | 44 |
| ExternalData::EventfullImporter#run | 8 | 33 |
| ExternalData::EventfullImporter#process_event | 7 | 17 |
| ExternalData::LocalezelImporter#run | 7 | 34 |
| PottyMouth::InstanceMethods#has_potty_mouth? | 6 | 14 |

Reek Results

Reek detects common code smells in ruby code.



| File Path | Method | Description | Type |
|-----------------------------|-----------------------------------|--------------------------------------|----------------|
| app/helpers/users_helper.rb | UsersHelper#link_to_current_user | calls current_user multiple times | Duplication |
| app/helpers/users_helper.rb | UsersHelper#link_to_login_with_ip | calls h(content_text) multiple times | Duplication |
| app/helpers/users_helper.rb | UsersHelper#link_to_user | has approx 6 statements | Long Method |
| app/helpers/users_helper.rb | UsersHelper#link_to_user | is controlled by enum user | Control Couple |

There are lots of
options

Use what works for
you

But don't ignore the
metrics!

Contact

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Questions?