



# Code Metrics Automation Server

# **Putne**

Open source

Ruby

Code Metrics & Visualization

Automation Server

**Putne**

# Putne



- Code metrics
- Automation server
- (Visualization)
- (Ruby / Git )

# Metrics

- Econometrics
- Informetrics
- Cinemetrics
- Sabermetrics
- ...

# Code metrics

- Index of code quality
- Code coverage
- Complexity
- Duplication
- Code smells
- Churn / Bugspot
- ...

# Ruby code metrics

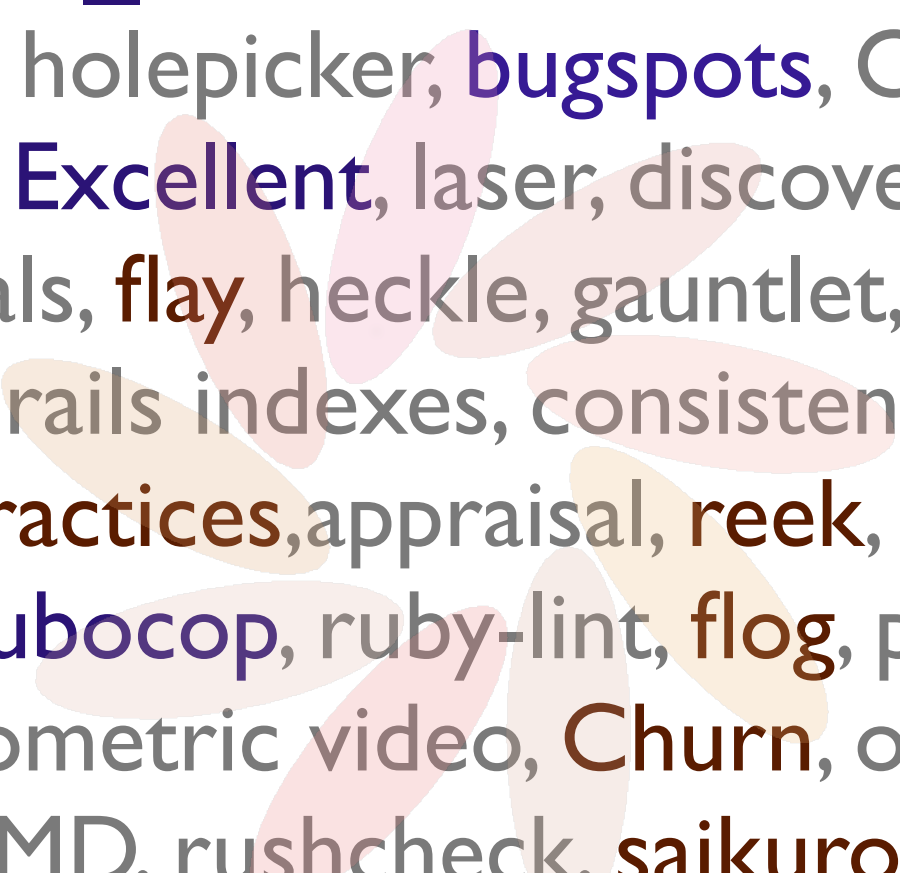
- There are many gems for code metrics

[https://github.com/metricfu/metric\\_fu/wiki/Code-Tools](https://github.com/metricfu/metric_fu/wiki/Code-Tools)

# Ruby code metrics

metric\_fu, saikuro-treemap, rcov, Simplecov,  
cane, code\_metrics, mutant, turbulence,  
brakeman, holepicker, bugspots, Outlaw, Git  
statistics, Excellent, laser, discover unused  
partaials, flay, heckle, gauntlet, roodi,  
repodepot, rails indexes, consistency fail, rails-  
best\_practices, appraisal, reek, hopper,  
metriks, rubocop, ruby-lint, flog, pelusa, rbx  
only, autometric video, Churn, old\_yeller,  
tailor, PMD, rushcheck, saikuro, crap4r,  
dont\_repeat\_yourself, perftools.rb, devtools,

sandi\_meter, code\_rippa, doc\_printer  
[https://github.com/metricfu/metric\\_fu/wiki/Code-Tools](https://github.com/metricfu/metric_fu/wiki/Code-Tools)



**metric\_fu**, saikuro-treemap, **rcov**, Simplecov,  
**cane**, **code\_metrics**, mutant, turbulence,  
brakeman, holepicker, **bugspots**, Outlaw, **Git**  
**statistics**, **Excellent**, laser, discover unused  
partaials, **flay**, heckle, gauntlet, **roodi**,  
repodepot, rails indexes, consistency fail, **rails-**  
**best\_practices**, appraisal, **reek**, hopper,  
metriks, **rubocop**, ruby-lint, **flog**, pelusa, rbx  
only, autometric video, **Churn**, old\_yeller,  
tailor, PMD, rushcheck, **saikuro**, crap4r,  
dont\_repeat\_yourself, perftools.rb, devtools,  
sandi\_meter, code\_rippa, doc printer ....



# Automation server

- Web service
  - Code climate
- Continuous integration
  - `matric_fu`
    - cane, flog, reek, flay, saikuro, ...
- Self-hosted
  - Putne
    - use push hook ( Just add your repo url! )

# Code Climate

nacyot/putne

Feed

Code

Issues

Trends

Search by class name

code climate 2.2

Tweet

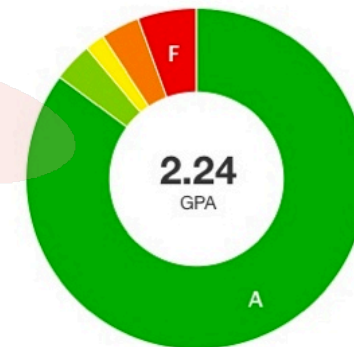
**A** → **B** Smell has gotten **worse**. about 8 hours ago

**+** Eight classes/modules were **added**. about 23 hours ago

- A** Graph::ProjectsController
- A** GraphHelper
- D** Score
- A** ScoreCategory
- A** ScoreSource
- A** Smell
- A** SmellCategory
- A** SmellSource

**Summary of September 16th - 22nd**  
169 files changed, 2,412 insertions, 11,145 deletions

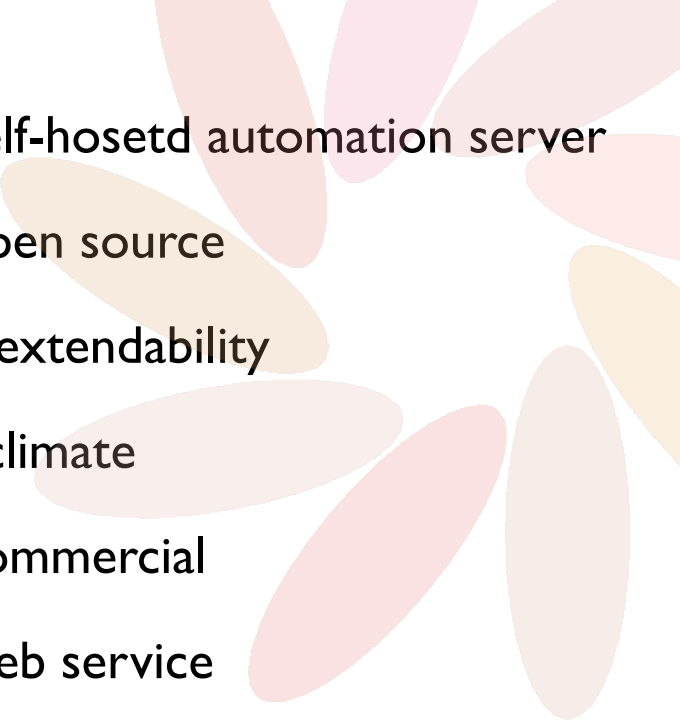
Classes by Rating



Hotspots

- F** RegisterReport
- F** MetricsController
- F** ProjectsController
- D** Score
- D** CommitHookController

# Putne vs Code climate

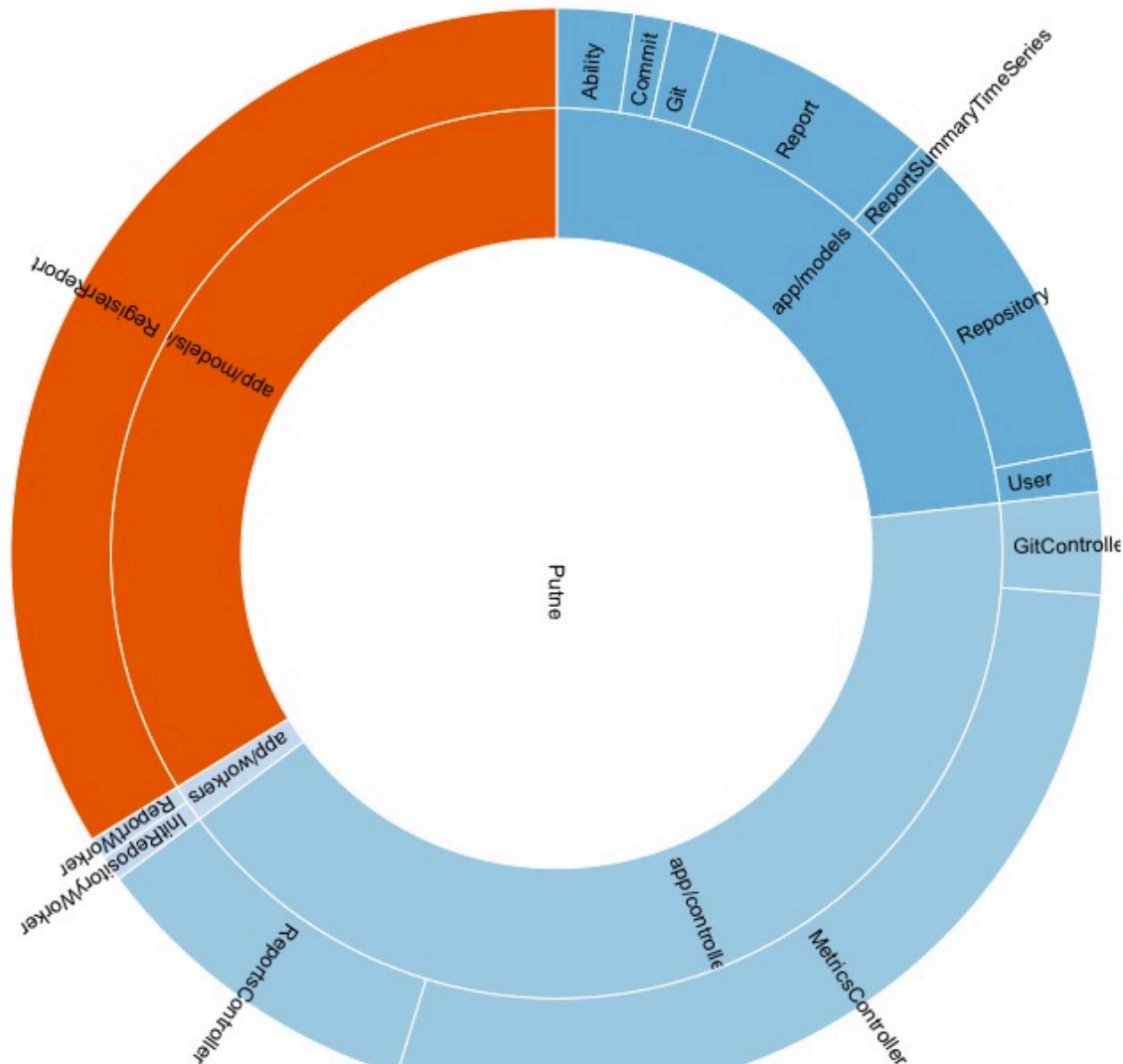
- Putne
    - is self-hosted automation server
    - is open source
    - has extensibility
  - Code climate
    - is commercial
    - is web service
    - provides limited report on purpose
- 

# Visualization

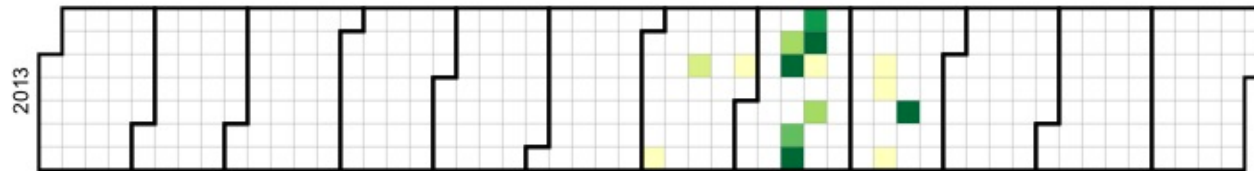


- is always starting point of statistical analysis.
- provides exploratory report.
- gives you bird-eye view of your projects.

# Putne complexity sunburst



# Activity calendar



/ Putne / master - / Reports - / f2d9ac82f - (-x commits) to latest commit

## Putne Summary

## Summary

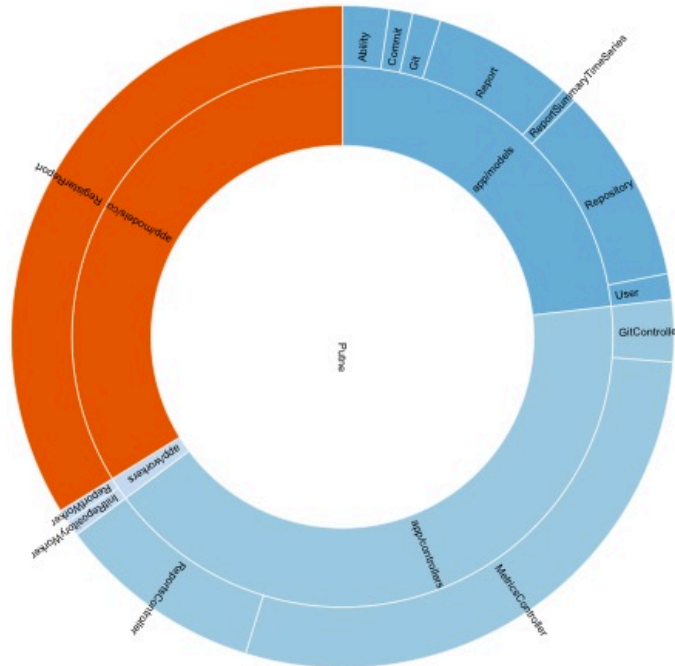
# of files	56	
# of classes	38	
# of methods	128	
Complexities	984	
Com / Methods	7	
Duplications	6	
Smells	164	
Churns	351	

## Hotspot - classes

1.	Report
2.	Git
3.	ReportCreator

## Hotspot - methods

1.	Report#init
2.	Git#load_repository
3.	Git#create_report



## Time machine

ID:  
Hash: ..

## Project summary

Reports	1
Activities	190
Committers	

## Current report

Classes	38
x <sup>2</sup> Complexities	2660
Smells	164
Duplications	6
Churns	351

## Repository

Settings

## Commit trend

Activity

table	table	striped
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Total commits #

Last week

Last month

Committer

- 1.
- 2.
- 3.



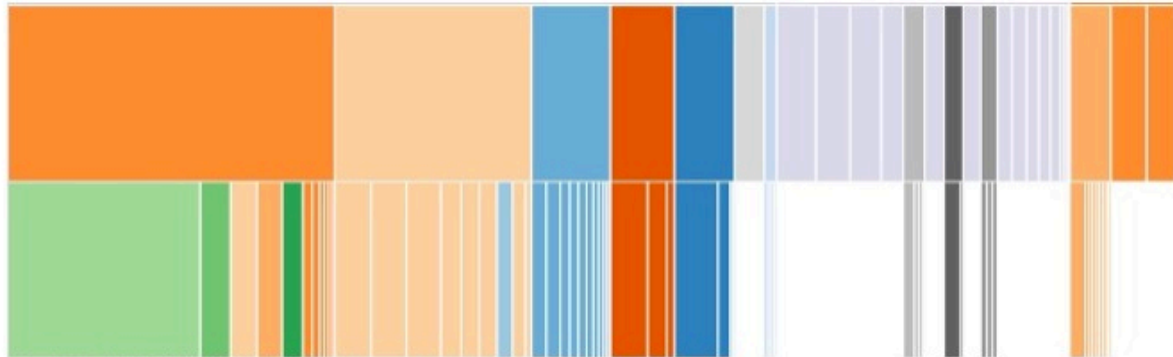
## Code quality timeline

## Summary

# of files	56	
# of classes	38	



## Class - Smells Graph



## Listing smells

Method name	Small type
ApplicationController	IrresponsibleModule
CommentsController	IrresponsibleModule
MainController	IrresponsibleModule
MetricsController	TooManyInstanceVariables
MetricsController	IrresponsibleModule
MetricsController	DuplicateMethodCall
MetricsController#method	DuplicateMethodCall
MetricsController	DuplicateMethodCall
MetricsController#method	DuplicateMethodCall
MetricsController	DuplicateMethodCall
MetricsController#method	DuplicateMethodCall
MetricsController	TooManyStatements
MetricsController#method	TooManyStatements



# TOIBE Index

Position Sep 2013	Position Sep 2012	Delta in Position	Programming Language	Ratings Sep 2013	Delta Sep 2012	Status
1	1	=	C	16.975%	-2.32%	A
2	2	=	Java	16.154%	-0.11%	A
3	4	↑	C++	8.664%	-0.48%	A
4	3	↓	Objective-C	8.561%	-1.21%	A
5	6	↑	PHP	6.430%	+0.82%	A
6	5	↓	C#	5.564%	-1.03%	A
7	7	=	(Visual) Basic	4.837%	-0.69%	A
8	8	=	Python	3.169%	-0.69%	A
9	11	↑↑	JavaScript	2.015%	+0.69%	A
10	14	↑↑↑↑	Transact-SQL	1.997%	+1.12%	A
11	15	↑↑↑↑	Visual Basic .NET	1.844%	+1.00%	A
12	9	↓↓↓	Perl	1.692%	-0.57%	A
13	10	↓↓↓	Ruby	1.382%	-0.34%	A

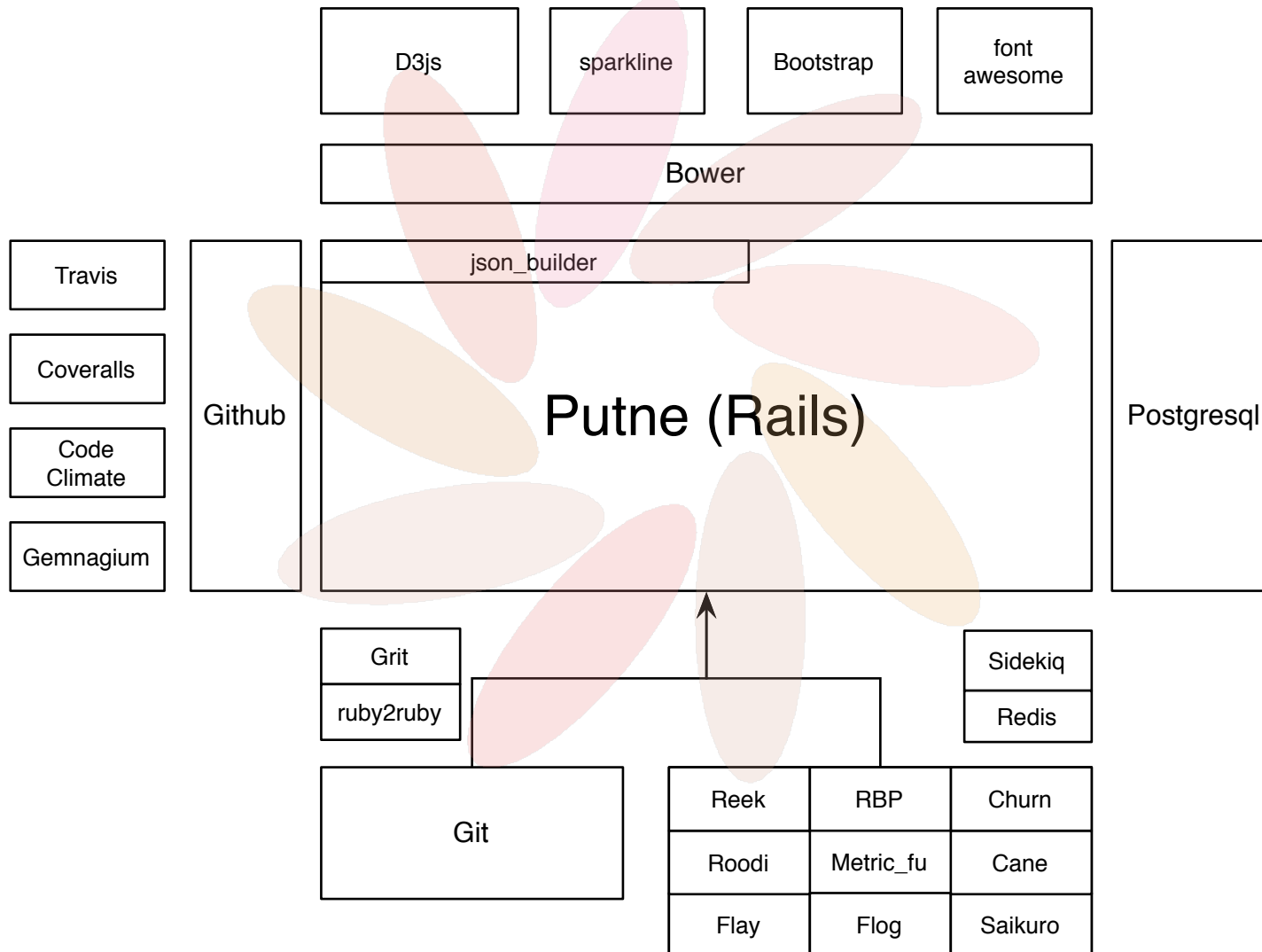
<http://www.tiobe.com/index.php/content/paperinfo/tpci/index.html>

# Repository

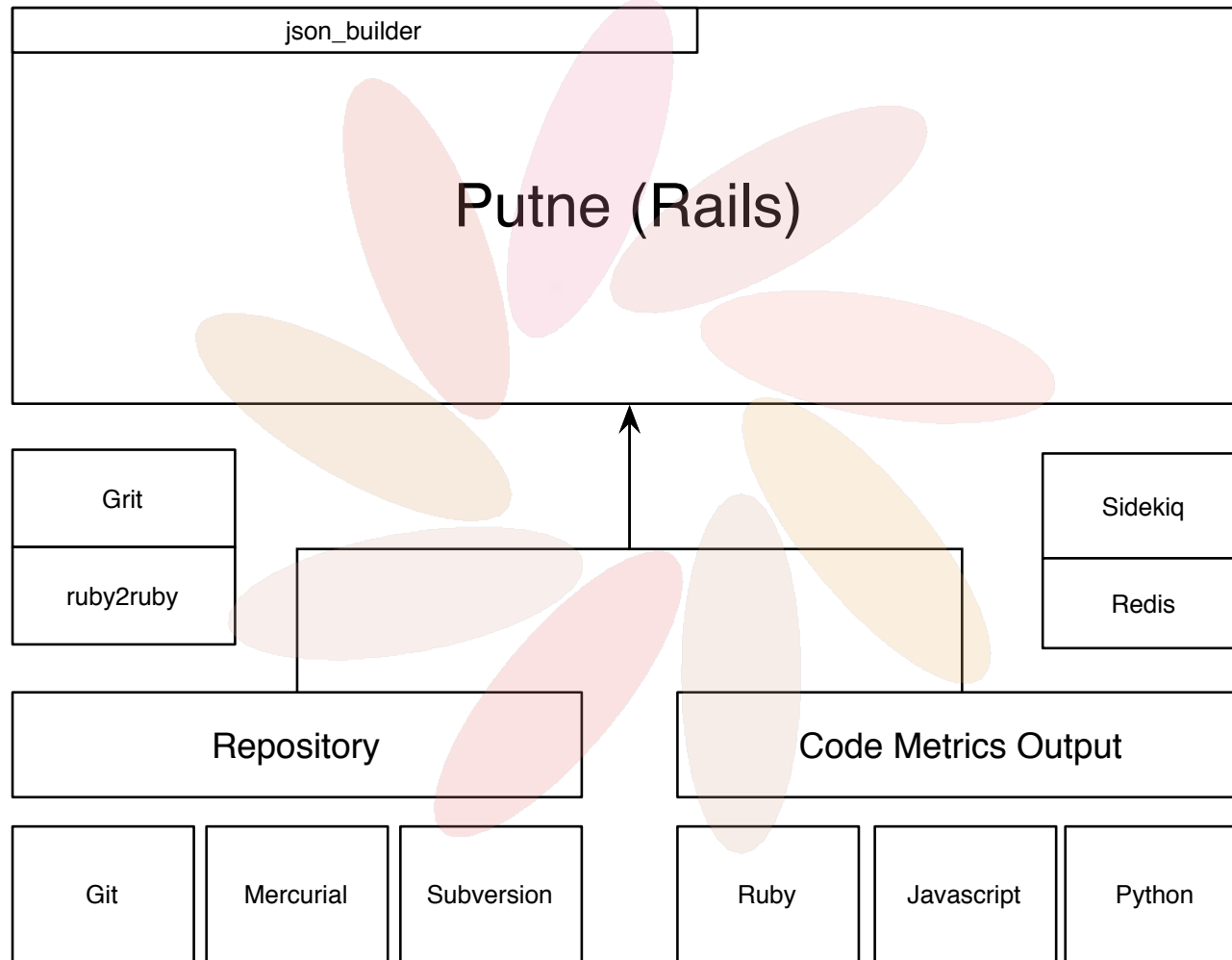
has  $\geq 1$  stars in github

Ruby	147,451
Javascript	126,887
Java	93,303
Python	73,940
PHP	68,448
C	39,800
Perl	37,224
C++	35,870
Shell	22,037
C#	21,997

# Architecture



# Todo #1



# Todo #2

- Other code metrics report
- Notification
- PDF export
- Github API
- Shell interface
- And there are many issues on putne github repo.



**Questions?**