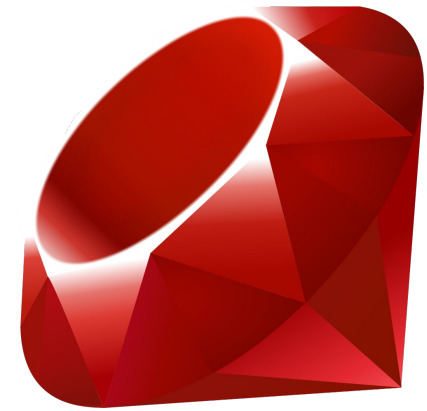


Code Metrics
Automation Server

Putne

Open source

Ruby



Code Metrics & Visualization
Automation Server



Putne 풋내 [훈내]

1. 새로 나온 푸성귀나 풋나물 따위로 만든 음식에서 나는 풀 냄새 .
2. 경험이 적거나 다 자라지 못한 어린 티를 비유적으로 이르는 말 .

- 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

metric fu, saikuro-treemap, rcov, Simplecov,
Ruby code metrics
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

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dont_repeat_yourself, perftools.rb, devtools,
sandi_meter, code_rippa, doc printer


```
Repository#validates_repository calls update_attribute(:valida, false) twice (DuplicateMethodCall)
app/models/role.rb -- 1 warning:
  Role has no descriptive comment (IrresponsibleModule)
app/models/score.rb -- 1 warning:
  Score has no descriptive comment (IrresponsibleModule)
app/models/score_category.rb -- 1 warning:
  ScoreCategory has no descriptive comment (IrresponsibleModule)
app/models/score_source.rb -- 1 warning:
  ScoreSource has no descriptive comment (IrresponsibleModule)
app/models/secret_key.rb -- 1 warning:
  SecretKey has no descriptive comment (IrresponsibleModule)
app/models/smell.rb -- 1 warning:
  Smell has no descriptive comment (IrresponsibleModule)
app/models/smell_category.rb -- 1 warning:
  SmellCategory has no descriptive comment (IrresponsibleModule)
app/models/smell_source.rb -- 1 warning:
  SmellSource has no descriptive comment (IrresponsibleModule)
app/models/target_class.rb -- 1 warning:
  TargetClass has no descriptive comment (IrresponsibleModule)
app/models/target_file.rb -- 1 warning:
  TargetFile has no descriptive comment (IrresponsibleModule)
app/models/target_method.rb -- 1 warning:
  TargetMethod has no descriptive comment (IrresponsibleModule)
app/models/user.rb -- 1 warning:
  User has no descriptive comment (IrresponsibleModule)
app/workers/init_repository_worker.rb -- 3 warnings:
  InitRepositoryWorker has no descriptive comment (IrresponsibleModule)
  InitRepositoryWorker#perform has approx 10 statements (TooManyStatements)
  InitRepositoryWorker#perform performs a nil-check. (NilCheck)
app/workers/report_worker.rb -- 4 warnings:
  ReportWorker has no descriptive comment (IrresponsibleModule)
  ReportWorker#perform calls puts("delete .metrics_lock") twice (DuplicateMethodCall)
  ReportWorker#perform calls repo.workspace_path twice (DuplicateMethodCall)
  ReportWorker#perform has approx 13 statements (TooManyStatements)
160 total warnings
/home/hsin/prog/_working/putne%
/home/hsin/prog/_working/putne%
```

Automation server

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

새로운 프로젝트 만들기

Ruby

Git

* 프로젝트 이름

Title

프로젝트 설명

Description

버전관리 저장소 URL(Git)

`https://github.com/ryanb/cancan.git`

Create Project

새 프로젝트 만들기.

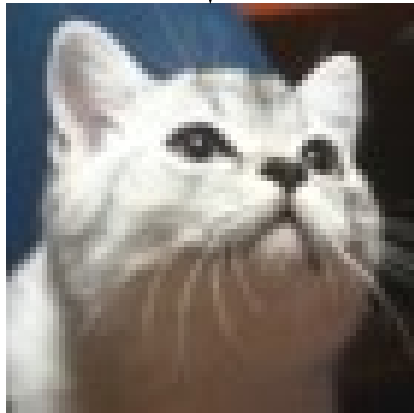
이 페이지에서 새로운 Putne 프로젝트를 생성할 수 있습니다. 여러분의 Ruby 소스코드를 Putne에 등록하면 서버에서 자동적으로 코드의 변경사항을 확인하고, 코드의 품질을 측정해줍니다. 코드의 품질은 사람의 건강상태와 같습니다.

잘 관리된 프로젝트일 수록 오랜 기간 개발에도 버틸 수 있으며 유지보수 또한 쉬워집니다.

현재는 Ruby와 Git 저장소만을 지원합니다.

Hook url

`http://127.0.0.1:3000/projects/11/api/hook`



Push

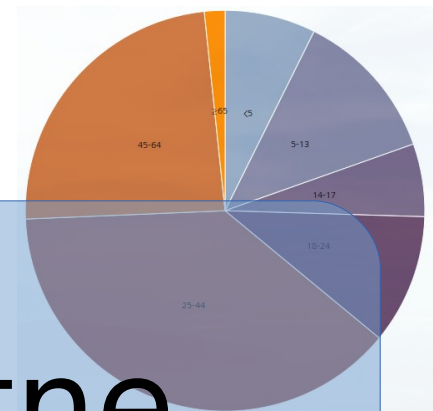
Github

Ci server

Gitlab

Hook

Putne



Putne vs Code climate

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

Code Climate

nacyot/putne

Feed

Code

Issues

Trends

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

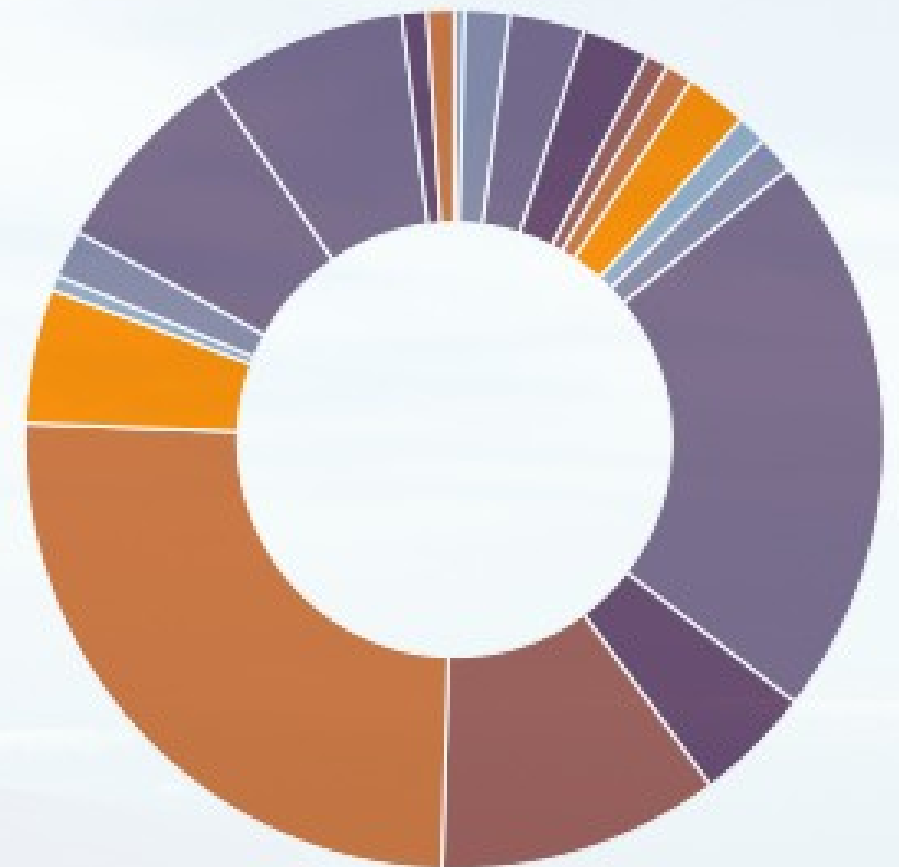
putne

Summary

Complexity

Summary

# of files	60	
# of classes	40	
# of methods	134	
Complexities	1066	
Com / Methods	7	
Duplications	6	
Smells	178	
Churns	394	



247.0 ms
0.4 ms
446.0 ms
0.4 ms
0.4 ms
0.4 ms
0.4 ms

/ 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_reposiotry
3.	Git#create_report



Time machine

ID:
Hash: ..

Project summary

Reports	1
Activities	190
Committers	

Current report

Classes	38
x ² Complexities	2660
Smells	164
Duplications	6
Churns	351

- Repository
- Settings

Commit trend

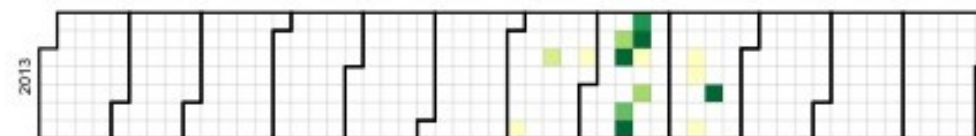
Activity

table	table	striped
-------	-------	---------

Total commits #
Last week
Last month

Committer

-
-
-



Code quality timeline

Summary

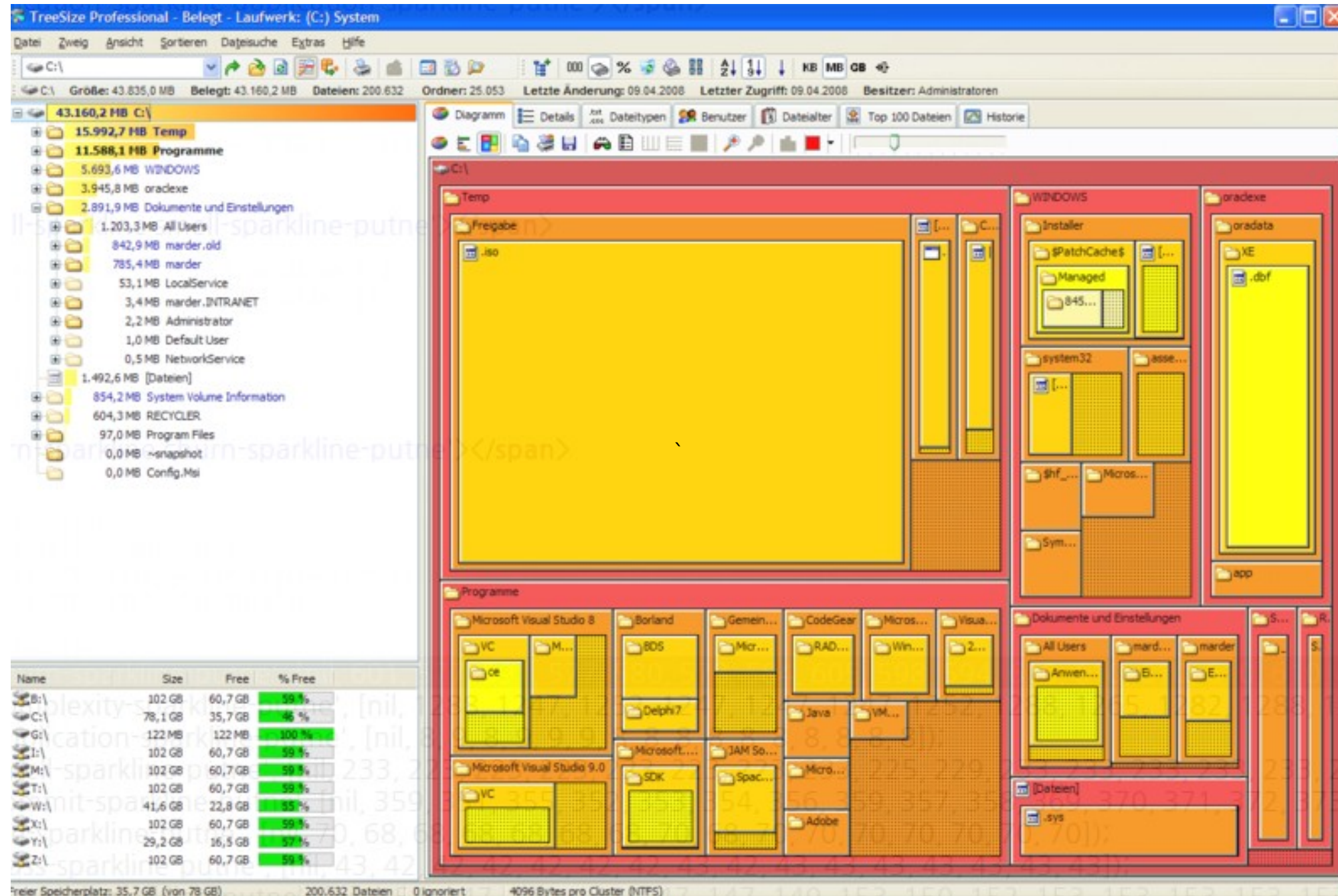
# of files	56	
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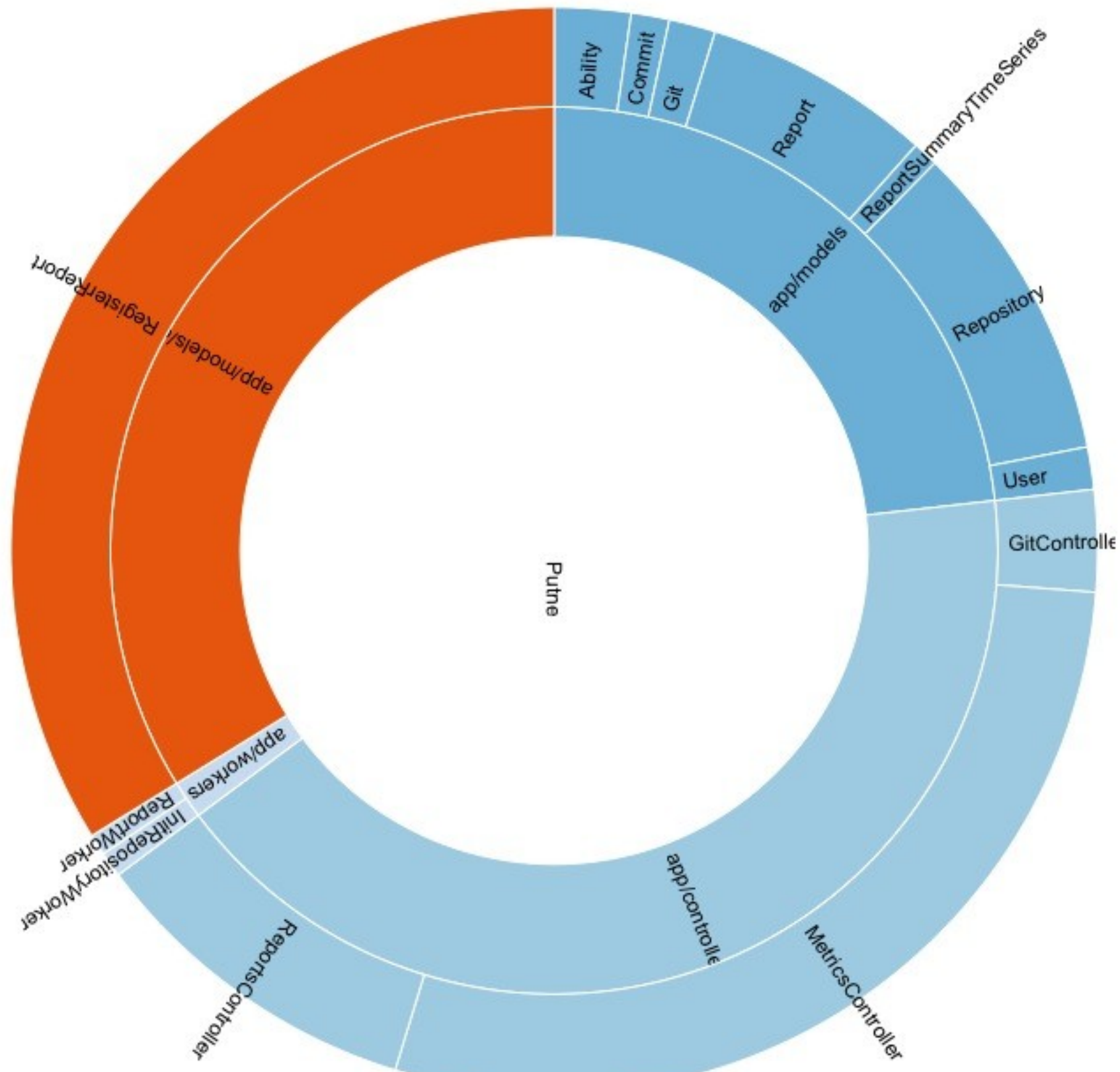
Visualization

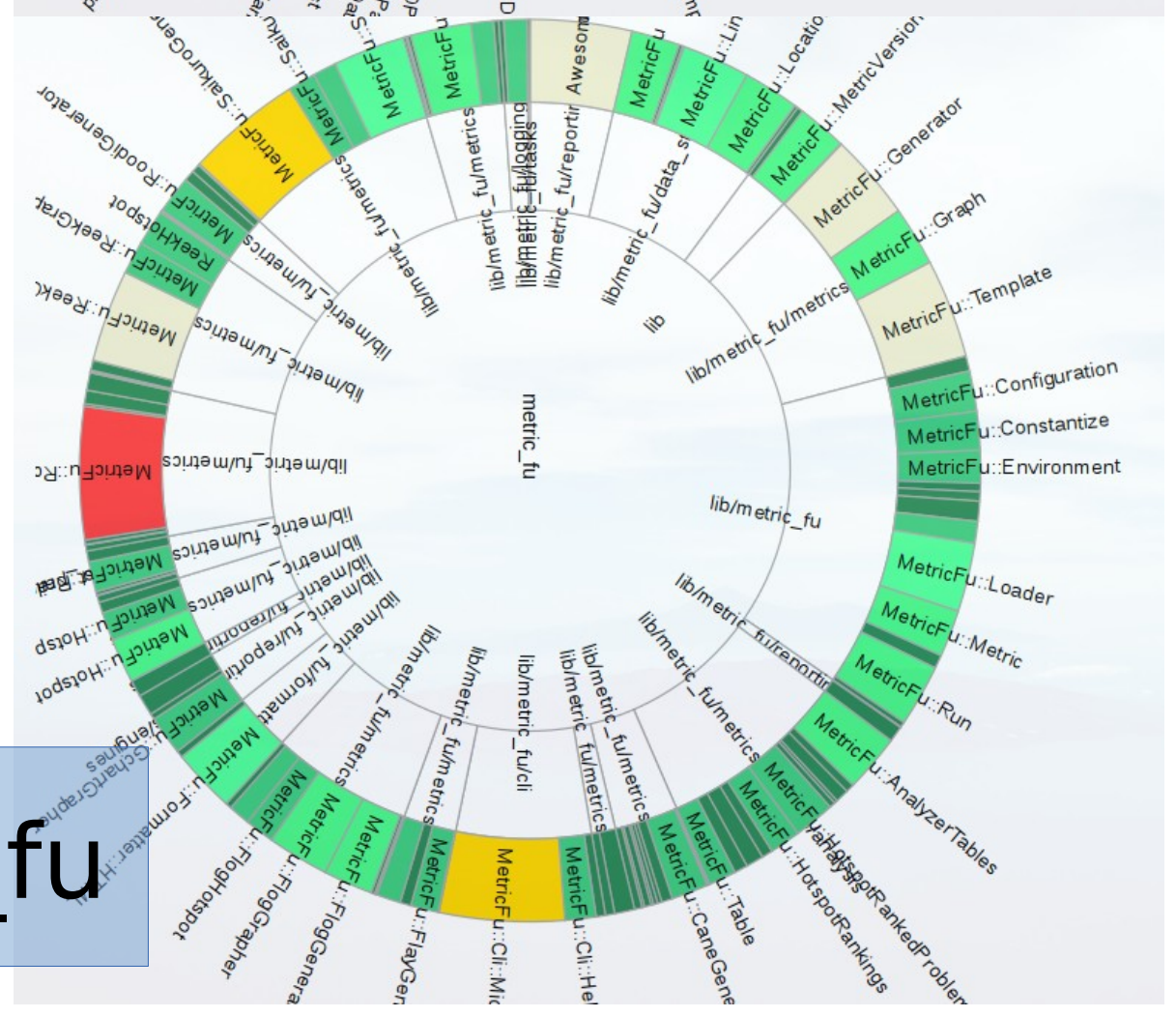
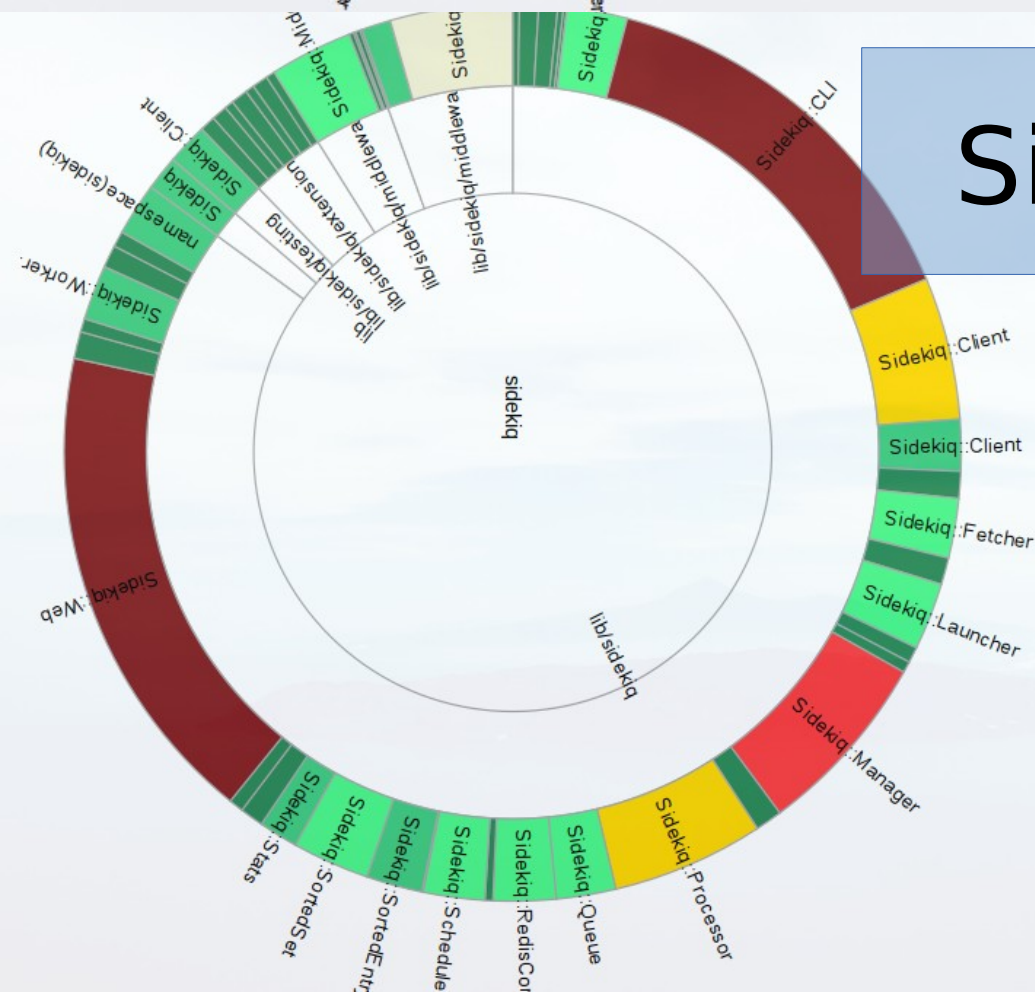
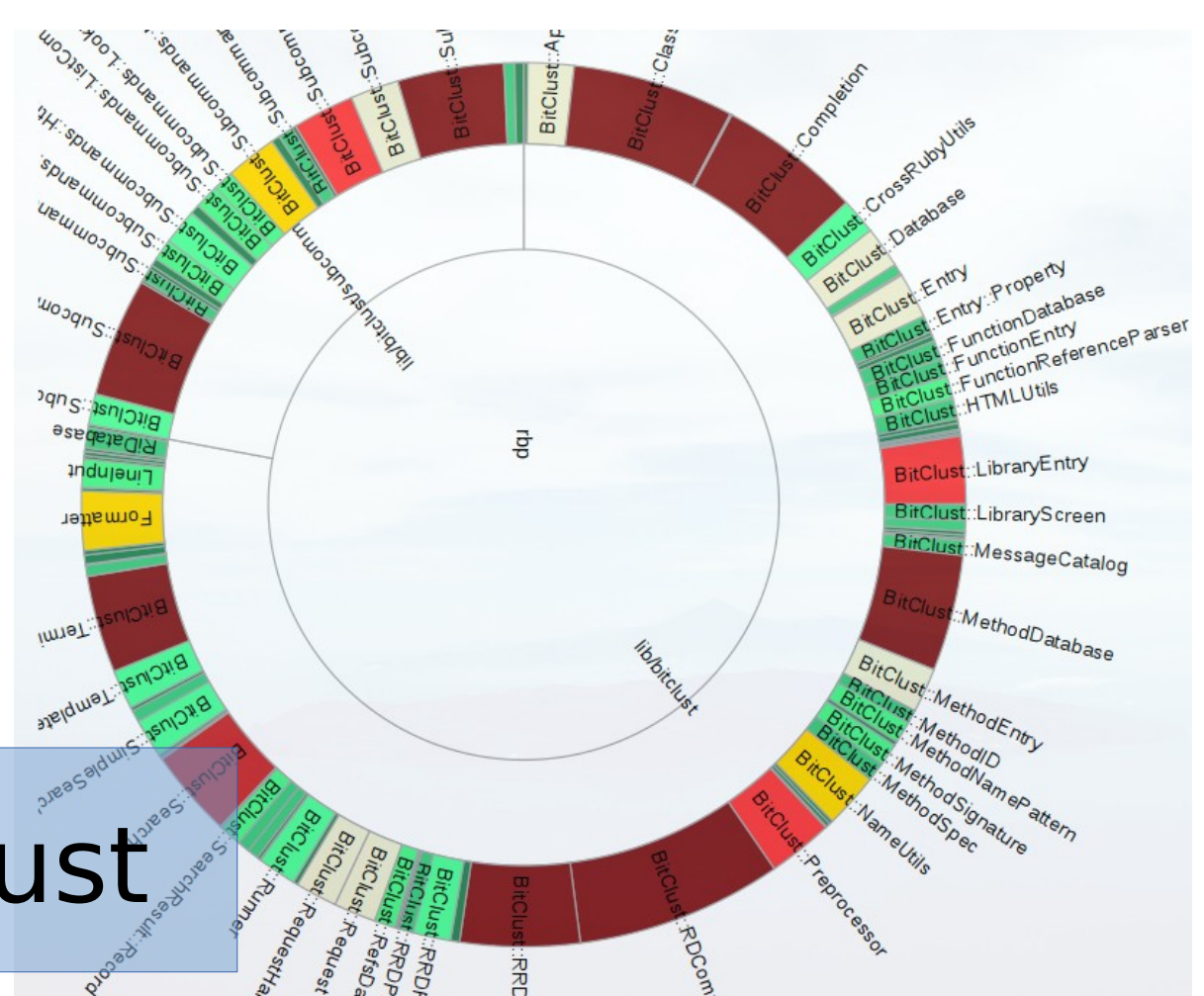
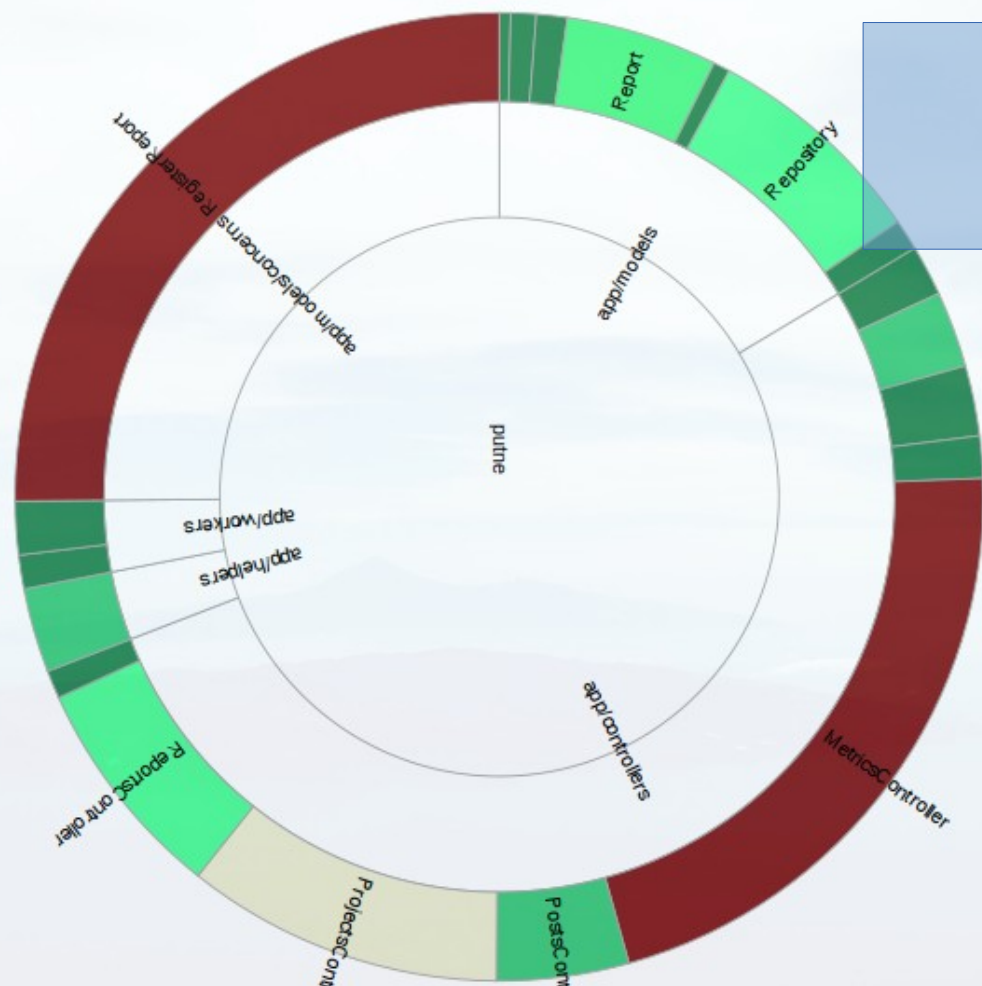
- is always starting point of statistical analysis.
- provides exploratory report.
- gives you bird-eye view of your projects.
- 百聞以不如一見

Statistical transformation

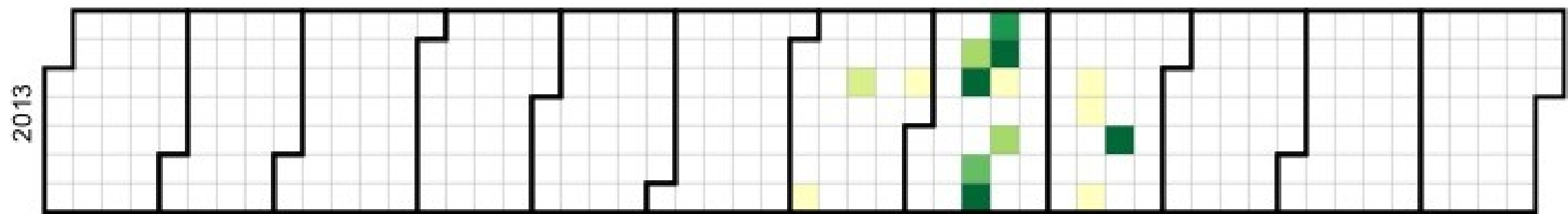


Putne complexity sunburst





Activity calendar



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 > 1 stars in github

Javascript	108566
Ruby	74634
Python	64129
PHP	53411
Java	52648
C	30880
C++	22822
Objective-C	21555
C#	14145
Shell	13930

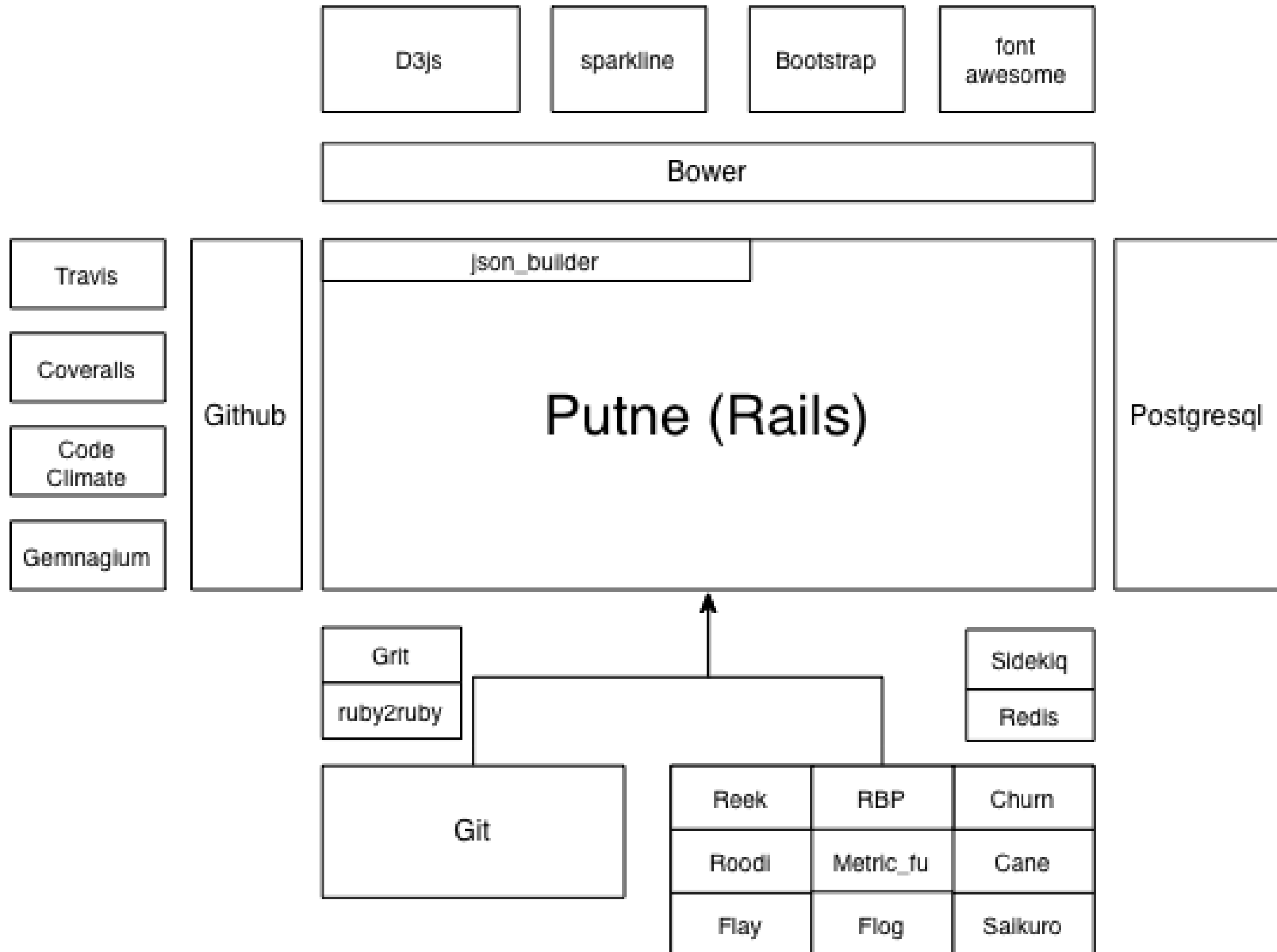




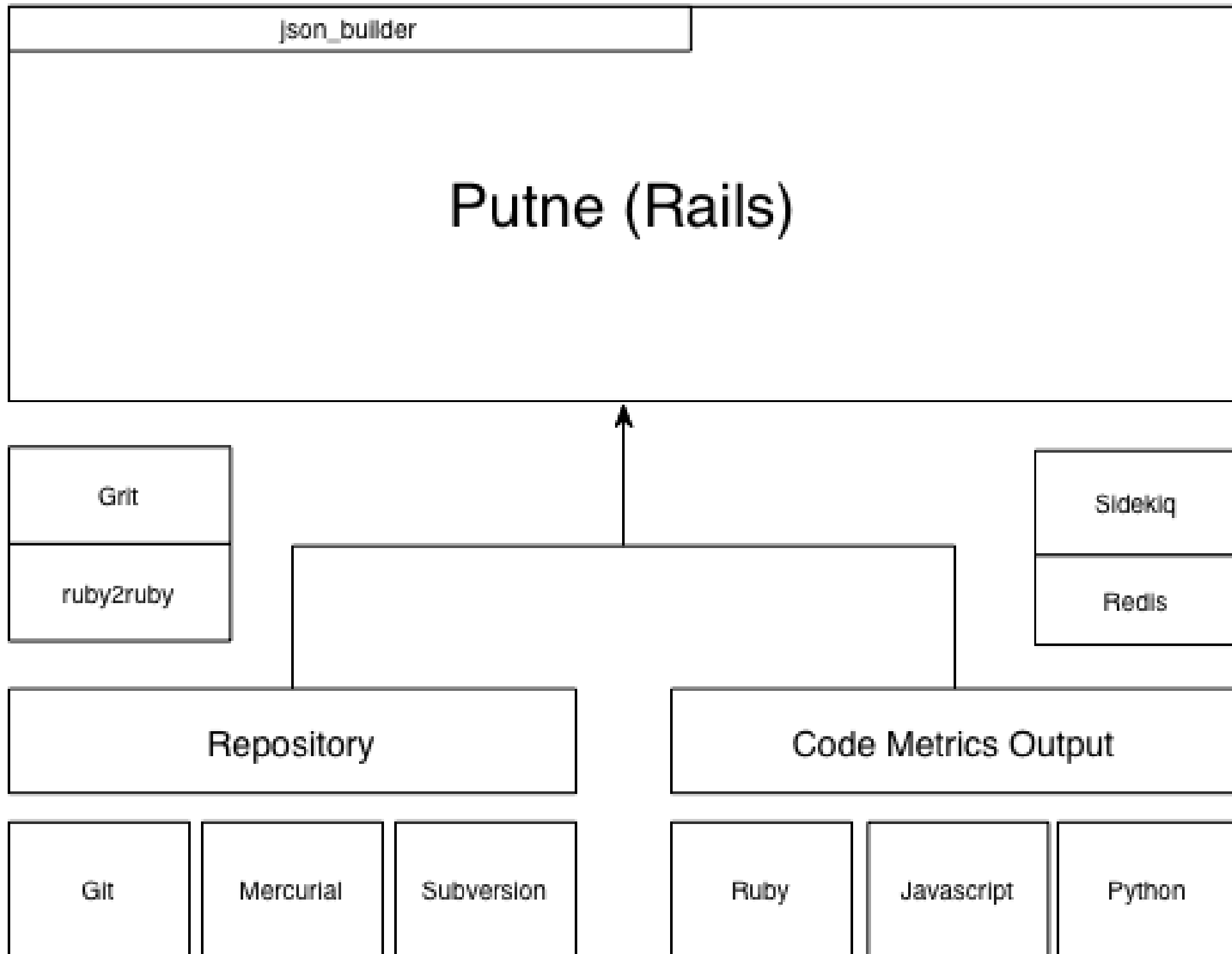
Chef



Architecture



Todo #1



Todo #2

- Other code metrics report
- Commit analysis / Blame
- Scoring and finding hotspot
- PDF export
- Github API
- Shell interface
- And there are many issues on putne github repo.

Questions?