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title: "Alambic – R analysis document" author: "Boris Baldassari" output: pdf_document: toc: true toc_depth: 3 —

Summary

This plugin generates a PDF document with information about project **tools.cdt**.

This plugin is intended as an example of R Markdown document to help people easily setup their own R analysis on software development data.

Metrics

Mnemo	Value
CI_JOBS	50.00
CI_JOBS_FAILED_1W	2.00
CI_JOBS_GREEN	18.00
CI_JOBS_GREEN_RATIO	78.00
CI_JOBS_RED	2.00
CI_JOBS_YELLOW	3.00
DOC_GOV	1.00
GOV_BOARD_PUBLIC	1.00
ITS_AUTHORS	4421.00
ITS_AUTHORS_1M	23.00
ITS_AUTHORS_1W	4.00
ITS_AUTHORS_1Y	150.00
ITS_CREATED_1M	33.00
ITS_CREATED_1W	4.00
ITS_CREATED_1Y	434.00
ITS_DIVERSITY_RATIO_1Y	2.00
ITS_ISSUES_ALL	21907.00
ITS_OPEN	4801.00
ITS_OPEN_OLD	0.00
ITS_OPEN_PERCENT	22.00
ITS_OPEN_UNASSIGNED	0.00
ITS_UPDATED_1M	33.00
ITS_UPDATED_1W	4.00
ITS_UPDATED_1Y	434.00
MLS_USR_AUTHORS	7348.00
MLS_USR_AUTHORS_1M	28.00
MLS_USR_AUTHORS_1W	5.00
MLS_USR_AUTHORS_1Y	367.00
MLS_USR_DIVERSITY_RATIO_1Y	3.00
MLS_USR_POSTS	14130.00
MLS_USR_POSTS_1M	59.00
MLS_USR_POSTS_1W	5.00
MLS_USR_POSTS_1Y	1182.00
MLS_USR_THREADS	14130.00
MLS_USR_THREADS_1M	36.00
MLS_USR_THREADS_1W	5.00
MLS_USR_THREADS_1Y	470.00
OSS_DEP_CHECK	1.00
OSS_ESCALATE	1.00
OSS_INCLUSION	1.00
PROJECT_ACCESS_INFO	1.00
PROJECT_CI_ACCESS	0.00
PROJECT_CI_INFO	0.00
PROJECT_DL_ACCESS	1.00
PROJECT_DL_INFO	1.00
PROJECT_DOC_ACCESS	1.00
PROJECT_DOC_INFO	7.00
PROJECT_GETTINGSTARTED_INFO	1.00
PROJECT_ITS_ACCESS	0.00
PROJECT_ITS_INFO	5.00
PROJECT_MLS_ACCESS	1.00
PROJECT_MLS_INFO	1.00
PROJECT_REL_VOL	52.00
PROJECT_SCM_ACCESS	1.00
PROJECT_SCM_INFO	1.00
SCM_AUTHORS	312.00
SCM_AUTHORS_1M	6.00
SCM_AUTHORS_1W	1.00
SCM_AUTHORS_1Y	33.00
SCM_COMMITS	34677.00
SCM_COMMITS_1M	36.00
SCM_COMMITS_1W	3.00
SCM_COMMITS_1Y	584.00
SCM_COMMITTERS	165.00
SCM_COMMITTERS_1M	6.00
SCM_COMMITTERS_1W	1.00
SCM_COMMITTERS_1Y	21.00
SCM_DIVERSITY_RATIO_1Y	27.00
SCM_MOD_LINES	11622109.00
SCM_MOD_LINES_1M	4156.00
SCM_MOD_LINES_1W	140.00
SCM_MOD_LINES_1Y	841524.00
SO_ANSWERS_VOL_5Y	827.00
SO_ANSWER_RATE_1Y	0.46
SO_ANSWER_RATE_5Y	0.74
SO_ASKERS_5Y	833.00
SO_QUESTIONNS_VOL_5Y	1115.00
SO_VIEWS_VOL_5Y	412367.00
SO_VOTES_VOL_5Y	922.00
SQ_RULES	0.00

Project Commits one week

ID: PROJECT_COMMITS_1W

Value:

Description: Total number of commits in source code management repositories dated during the last week. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'author date' (when there is a difference between author date and committer date). Time range is measured as a one week period starting the day before the data retrieval.

Number of comment lines

ID: SQ_COMMENT_LINES

Value:

Description: Number of lines containing either comment or commented-out code. Non-significant comment lines (empty comment lines, comment lines containing only special characters, etc.) do not increase the number of comment lines. For Java, file headers are not counted as comment lines (as they usually define the license). Lines containing the following instructions are counted both as comments and lines of code: AUTHOR, INSTALLATION, DATE-COMPILED, DATE-WRITTEN, SECURITY. For more information on comments for each language, see <https://docs.sonarqube.org/display/SONAR/Metrics+-+Comment+lines>.

ITS information

ID: PROJECT_ITS_INFO

Value: 5 (5 / 5)

Description: Is the bugzilla info correctly filled in the PMI records? The project management infrastructure file holds information about one or more bugzilla instances. This test checks that at least one bugzilla instance is defined, with a product identifier, a create_url to enter a new issue, and a query_url to fetch all the issues for the project.

SCM Still Open Pull requests one month

ID: SCM_PRS_OPENED_STILL_1M

Value:

Description: Total number of Pull Requests (PRs) or Merge Requests (MRs) that have been opened more than one month ago and are still in the opened state in source code management repositories. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'author date' (when there is a difference between author date and committer date). Time range is measured as a one month period starting the day before the data retrieval (example: if retrieval is on Feb 3rd, period is from Jan 3rd to Feb 2nd, both included).

User ML Threads one week

ID: MLS_USR_THREADS_1W

Value: 5

Description: The total number of threads (one question followed by zero or more answers) found in the User mailing list during last week. Having many threads shows the mailing list is active. It encourages people to participate, ask and answer questions.

Commented code

ID: SQ_COM_CODE

Value:

Description: Commented lines of code See more information about commented code on SonarQube doc web site. There is a well-documented debate on Stack Overflow as well. For more information on comments for each language, see <https://docs.sonarqube.org/display/SONAR/Metrics+-+Comment+lines>.

Number of critical issues

ID: SQ_VIOLATIONS_CRITICAL

Value:

Description: The total number of issues (violations) found by SonarQube with a severity equal to CRITICAL. For more information on maintainability metrics as computed by SonarQube, see <https://docs.sonarqube.org/display/SONAR/Metric+Definitions#MetricDefinitions-Issues>.

Governance documentation

ID: DOC_GOV

Value: 1

Description: Is there a documentation explaining how decisions are made?

SCM Open Pull requests one week

ID: SCM_PRS_OPENED_1W

Value:

Description: Total number of Pull Requests (PRs) or Merge Requests (MRs) that have been opened within the last week in source code management repositories. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'author date' (when there is a difference between author date and committer date). Time range is measured as a one week period starting the day before the data retrieval.

SCM Staled Open Pull requests one month

ID: SCM_PRS_OPENED_STALED_1M

Value:

Description: Total number of Pull Requests (PRs) or Merge Requests (MRs) that are in the opened state and have not been updated since one month. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'author date' (when there is a difference between author date and committer date). Time range is measured as a one month period starting the day before the data retrieval (example: if retrieval is on Feb 3rd, period is from Jan 3rd to Feb 2nd, both included).

SCM committers

ID: SCM_COMMITTERS

Value: 165

Description: Total number of identities found as committers of commits in source code management repository. Source code management repositories are those considered as such in the project documentation. Commits in all branches are considered. Date used for each commit is 'committer date' (when there is a difference between author date and committer date). An identity is considered as committer if it appears as such in the commit record.

ITS Open issues

ID: ITS_OPEN

Value: 4801 (3 / 5)

Description: Number of issues with a state 'open' at the time of analysis.

Project committers one month

ID: PROJECT_COMMITTERS_1M

Value:

Description: Total number of identities found as committers of commits in source code management repositories dated during the last month. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'committer date' (when there is a difference between author date and committer date). Time range is measured as a one month period starting the day before the data retrieval (example: if retrieval is on Feb 3rd, period is from Jan 3rd to Feb 2nd, both included).

SCM Changed Lines

ID: SCM_MOD_LINES

Value: 11622109

Description: Total number of changed lines (added, removed, changed) in source code management repositories. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'author date' (when there is a difference between author date and committer date).

ITS Open issues (%)

ID: ITS_OPEN_PERCENT

Value: 22

Description: Percentage of open issues compared to the overall number of issues registered in the system.

Stack Overflow Askers (5Y)

ID: SO_ASKERS_5Y

Value: 833

Description: The number of distinct people asking questions related to the project's tag posted on Stack Overflow during the last 5 years. Having many people ask questions about the project indicates a strong interest from the community, and a good support. The list of questions and their answers associated to the tag can be browsed on the Stack Overflow web site.

Stack Overflow Answers (5Y)

ID: SO_ANSWERS_VOL_5Y

Value: 827

Description: The number of answers to questions related to the project's tag posted on Stack Overflow during the last 5 years. Having many answers posted about the project indicates a strong interest from the community, and a good support. The list of questions and their answers associated to the tag can be browsed on the Stack Overflow web site.

Docs information

ID: PROJECT_DOC_INFO

Value: 7 (5 / 5)

Description: Is the documentation info correctly filled in the PMI records? The project management infrastructure file holds information about various documentation and manuals. This test checks the number of doc-related entries defined in the PMI: build_doc, documentation, documentation_url, forums, gettingstarted_url, mailing_lists, website_url, wiki_url.

Project Commits

ID: PROJECT_COMMITS

Value:

Description: Total number of commits in source code management repositories. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'author date' (when there is a difference between author date and committer date).

SCM authors one year

ID: SCM_AUTHORS_1Y

Value: 33

Description: Total number of identities found as authors of commits in source code management repositories dated during the last year. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'author date' (when there is a difference between author date and committer date). Time range is measured as a one year period starting the day before the data retrieval (example: if retrieval is on Feb 3rd 2016, period is from Feb 3rd 2015 to Feb 3rd 2016, both included).

SCM Open Pull requests one year

ID: SCM_PRS_OPENED_1Y

Value:

Description: Total number of Pull Requests (PRs) or Merge Requests (MRs) that have been opened within the last year in source code management repositories. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'author date' (when there is a difference between author date and committer date). Time range is measured as a one year period starting the day before the data retrieval (example: if retrieval is on Feb 3rd 2016, period is from Feb 3rd 2015 to Feb 3rd 2016, both included).

Package Tangle index

ID: SQ_PACKAGES_TANGLE_IDX

Value:

Description: The Package tangle index, as defined in SonarQube.

Access information

ID: PROJECT_ACCESS_INFO

Value: 1 (3 / 5)

Description: Is the access info (downloads, update sites..) correctly filled in the PMI records? The project management infrastructure file holds information about how to access binaries of the project. This test checks the number of access-related entries defined in the PMI: download_url, downloads, update_sites.

Stack Overflow Questions (5Y)

ID: SO_QUESTIONS_VOL_5Y

Value: 1115

Description: The number of questions related to the project's tag posted on Stack Overflow during the last 5 years. Having many questions posted about the project indicates a strong interest from the community. The list of questions associated to the tag can be browsed on the Stack Overflow web site.

SCM diversity ratio

ID: SCM_DIVERSITY_RATIO_1Y

Value: 27

Description: The ration of commits divided by the number of authors, over a period of one year.

Project committers one year

ID: PROJECT_COMMITTERS_1Y

Value:

Description: Total number of identities found as committers of commits in source code management repositories dated during the last year. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'committer date' (when there is a difference between author date and committer date). Time range is measured as a one year period starting the day before the data retrieval (example: if retrieval is on Feb 3rd 2016, period is from Feb 3rd 2015 to Feb 3rd 2016, both included).

Stack Overflow Votes (5Y)

ID: SO_VOTES_VOL_5Y

Value: 922

Description: The total number of votes on questions related to the project's tag on Stack Overflow during the last 5 years. Having many votes on questions about the project indicates a strong interest from the community. The list of questions and their answers associated to the tag can be browsed on the Stack Overflow web site.

SCM Still Open Pull requests one year

ID: SCM_PRS_OPENED_STILL_1Y

Value:

Description: Total number of Pull Requests (PRs) or Merge Requests (MRs) that have been opened more than one year ago and are still in the opened state in source code management repositories. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'author date' (when there is a difference between author date and committer date). Time range is measured as a one year period starting the day before the data retrieval (example: if retrieval is on Feb 3rd 2016, period is from Feb 3rd 2015 to Feb 3rd 2016, both included).

SCM information

ID: PROJECT_SCM_INFO

Value: 1 (4 / 5)

Description: Is the source_repo info correctly filled in the PMI records? The project management infrastructure file holds information about one or more source repositories. This test checks that at least one source repository is defined, and accessible.

Number of minor issues

ID: SQ_VIOLATIONS_MINOR

Value:

Description: The total number of issues (violations) found by SonarQube with a severity equal to MINOR. For more information on maintainability metrics as computed by SonarQube, see <https://docs.sonarqube.org/display/SONAR/Metric+Definitions#MetricDefinitions-Issues>.

Comment lines density

ID: SQ_COMR

Value:

Description: Density of comment lines = Comment lines / (Lines of code + Comment lines) * 100. With such a formula, 50% means that the number of lines of code equals the number of comment lines and 100% means that the file only contains comment lines For more information on comments for each language, see <https://docs.sonarqube.org/display/SONAR/Metrics+-+Comment+lines>.

User ML Authors

ID: MLS_USR_AUTHORS

Value: 7348

Description: The total number of different identities found in the User mailing list. Having many different authors is a sign of diversity and activity. It makes the support more reliable (i.e. increased presence of people) and more complete (i.e. more eyes to solve a problem).

SCM authors one week

ID: SCM_AUTHORS_1W

Value: 1

Description: Total number of identities found as authors of commits in source code management repositories dated during the last week. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'author date' (when there is a difference between author date and committer date). Time range is measured as a one week period starting the day before the data retrieval.

Number of yellow jobs

ID: CI_JOBS_YELLOW

Value: 3

Description: The number of yellow (unstable) jobs on the CI engine. Yellow jobs in CI define unstable builds. According to CI's documentation, a build is unstable if it was built successfully and one or more publishers report it unstable. For example if the JUnit publisher is configured and a test fails then the build will be marked unstable.

Has Readme

ID: SC_HAS_README

Value:

Description: Is there a readme file at the root of the directory?

File complexity

ID: SQ_CPX_FILE_IDX

Value:

Description: Average complexity by file. File complexity is computed using the Total complexity (SQ_CPX, see <https://docs.sonarqube.org/display/SONAR/Metric+Definitions#MetricDefinitions-Complexity>) divided by the number of files (SQ_FILES).

ITS Total issues

ID: ITS_ISSUES_ALL

Value: 21907

Description: Number of issues registered in the database, whatever their state is.

User ML Authors one week

ID: MLS_USR_AUTHORS_1W

Value: 5

Description: The total number of different identities found in the User mailing list during last week. Having many different authors is a sign of diversity and activity. It makes the support more reliable (i.e. increased presence of people) and more complete (i.e. more eyes to solve a problem).

Stack Overflow Answer rate (5Y)

ID: SO_ANSWER_RATE_5Y

Value: 0.74

Description: The average number of answers per questions related to the project's tag on Stack Overflow during the last 5 years. Having many answers posted about the project indicates a strong interest from the community, and a good support. The list of questions and their answers associated to the tag can be browsed on the Stack Overflow web site.

Project Commits one month

ID: PROJECT_COMMITS_1M

Value:

Description: Total number of commits in source code management repositories dated during the last month. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'author date' (when there is a difference between author date and committer date). Time range is measured as a one month period starting the day before the data retrieval (example: if retrieval is on Feb 3rd, period is from Jan 3rd to Feb 2nd, both included).

Doc access

ID: PROJECT_DOC_ACCESS

Value: 1

Description: Is the documentation info correctly filled in the PMI records? The project management infrastructure file holds information about various documentation and manuals. This test checks the number of doc-related entries defined in the PMI: build_doc, documentation, documentation_url, forums, gettingstarted_url, mailing_lists, website_url, wiki_url.

Has licence

ID: SC_HAS_LICENCE

Value:

Description: Is there a licence file at the root of the directory?

SCM access

ID: PROJECT_SCM_ACCESS

Value: 1

Description: Is the source_repo info correctly filled in the PMI records? The project management infrastructure file holds information about one or more source repositories. This test checks that at least one source repository is defined, and accessible.

Project authors

ID: PROJECT_AUTHORS

Value:

Description: Total number of identities found as authors of commits in source code management repository. Source code management repositories are those considered as such in the project documentation. Commits in all branches are considered. Date used for each commit is 'author date' (when there is a difference between author date and committer date). An identity is considered as author if it appears as such in the commit record (for systems logging several identities related to the commit, authoring identity will be considered).

SCM Commits one month

ID: SCM_COMMITS_1M

Value: 36 (4 / 5)

Description: Total number of commits in source code management repositories dated during the last month. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'author date' (when there is a difference between author date and committer date). Time range is measured as a one month period starting the day before the data retrieval (example: if retrieval is on Feb 3rd, period is from Jan 3rd to Feb 2nd, both included).

Ratio of green jobs

ID: CI_JOBS_GREEN_RATIO

Value: 78 (4 / 5)

Description: The number of green (successful) jobs on the CI engine, divided by the total number of jobs. Green (or blue) jobs in CI define successful builds.

User ML Threads one month

ID: MLS_USR_THREADS_1M

Value: 36 (5 / 5)

Description: The total number of threads (one question followed by zero or more answers) found in the User mailing list during last month. Having many threads shows the mailing list is active. It encourages people to participate, ask and answer questions.

Project authors one week

ID: PROJECT_AUTHORS_1W

Value:

Description: Total number of identities found as authors of commits in source code management repositories dated during the last week. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'author date' (when there is a difference between author date and committer date). Time range is measured as a one week period starting the day before the data retrieval.

Open issues

ID: PROJECT_ISSUES_OPEN

Value:

Description: The number of issues opened at the time of analysis on the GitLab project. This information is retrieved from GitLab itself, and may differ from numbers gathered from the actual issue tracking system used.

SCM Still Open Pull requests one week

ID: SCM_PRS_OPENED_STILL_1W

Value:

Description: Total number of Pull Requests (PRs) or Merge Requests (MRs) that have been opened more than one week ago and are still in the opened state in source code management repositories. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'author date' (when there is a difference between author date and committer date). Time range is measured as a one week period starting the day before the data retrieval.

Licences check

ID: SC_LIC_CHECK

Value:

Description: Licences check on the code, as provided by tools like ScanCode (or Black Duck or..). All licences found in the codebase that do not conform to a custom regexp are considered wrong. One should have as few as possible of them.

Technical debt

ID: SQ_SQALE_INDEX

Value:

Description: Effort to fix all maintainability issues. The measure is stored in minutes in the DB. For more information on maintainability metrics as computed by SonarQube, see <https://docs.sonarqube.org/display/SONAR/Metrics+Definitions+Definitions>. Maintainability.

SCM committers one week

ID: SCM_COMMITTERS_1W

Value: 1

Description: Total number of identities found as committers of commits in source code management repositories dated during the last week. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'committer date' (when there is a difference between author date and committer date). Time range is measured as a one week period starting the day before the data retrieval.

SCM Merged Pull requests

ID: SCM_PRS_MERGED

Value:

Description: Total number of Pull Requests (PRs) or Merge Requests (MRs) in the 'merged' state in source code management repositories.

Number of forks

ID: PROJECT_FORKS

Value:

Description: The number of forks for this project. More forks usually mean a greater activity.

Number of major issues

ID: SQ_VIOLATIONS_MAJOR

Value:

Description: The total number of issues (violations) found by SonarQube with a severity equal to MAJOR. For more information on maintainability metrics as computed by SonarQube, see <https://docs.sonarqube.org/display/SONAR/Metric+Definitions#MetricDefinitions-Issues>.

SCM Commits one week

ID: SCM_COMMITS_1W

Value: 3

Description: Total number of commits in source code management repositories dated during the last week. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'author date' (when there is a difference between author date and committer date). Time range is measured as a one week period starting the day before the data retrieval.

Number of jobs

ID: CI_JOBS

Value: 50

Description: The total number of jobs defined on the CI engine.

Number of files

ID: SQ_FILES

Value:

Description: The total number of files analysed.

CI information

ID: PROJECT_CI_INFO

Value: 0

Description: Is the continuous integration info correctly filled in the PMI records? The project management infrastructure file holds information about the location of CI services. This test checks the number of ci-related entries defined in the PMI.

SCM Open Pull requests one month

ID: SCM_PRS_OPENED_1M

Value:

Description: Total number of Pull Requests (PRs) or Merge Requests (MRs) that have been opened within the last month in source code management repositories. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'author date' (when there is a difference between author date and committer date). Time range is measured as a one month period starting the day before the data retrieval (example: if retrieval is on Feb 3rd, period is from Jan 3rd to Feb 2nd, both included).

ITS authors last month

ID: ITS_AUTHORS_1M

Value: 23 (4 / 5)

Description: Number of authors who created issues during last month. If today is 2017-02-01 then the range is from 2017-01-01 to 2017-02-01.

Code of Conduct

ID: SC_HAS_CODEOFCONDUCT

Value:

Description: Is there an initiative and written document to regulate the behaviour of individuals? (e.g. code of conduct) As an example, the Eclipse Foundation enforces the following code of conduct: https://www.eclipse.org/org/documents/Community_Code_of_Conduct.php .

Number of releases

ID: PMI_REL_VOL

Value:

Description: The number of releases recorded in the PMI. Milestones are retrieved from the PMI file and are counted whatever their target release is. Milestones are useful to assess the maturity of the release and improves predictability of the project's output, in terms of quality and time.

Project Commits one year

ID: PROJECT_COMMITS_1Y

Value:

Description: Total number of commits in source code management repositories dated during the last year. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'author date' (when there is a difference between author date and committer date). Time range is measured as a one year period starting the day before the data retrieval (example: if retrieval is on Feb 3rd 2016, period is from Feb 3rd 2015 to Feb 3rd 2016, both included).

Has contributing

ID: SC_HAS_CONTRIBUTING

Value:

Description: Is there a contributing or development guide file at the root of the directory?

User ML Threads

ID: MLS_USR_THREADS

Value: 14130

Description: The total number of threads (one question followed by zero or more answers) found in the User mailing list. Having many threads shows the mailing list is active. It encourages people to participate, ask and answer questions.

User ML diversity ratio

ID: MLS_USR_DIVERSITY_RATIO_1Y

Value: 3

Description: The ration of posts divided by the number of authors, over a period of one year.

SCM Changed Lines one week

ID: SCM_MOD_LINES_1W

Value: 140

Description: Total number of changed lines (added, removed, changed) in source code management repositories dated during the last week. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'author date' (when there is a difference between author date and committer date). Time range is measured as a one week period starting the day before the data retrieval.

Duplicated lines (%)

ID: SQ_DUPLICATED_LINES_DENSITY

Value:

Description: Density of duplication = Duplicated lines / Lines * 100.

SCM Open Pull requests

ID: SCM_PRS_OPENED

Value:

Description: Total number of Pull Requests (PRs) or Merge Requests (MRs) in the opened state in source code management repositories.

User ML Posts one month

ID: MLS_USR_POSTS_1M

Value: 59 (5 / 5)

Description: The total number of posts found in the User mailing list during last month. Having many posts shows the mailing list is active. It encourages people to participate, ask and answer questions.

Number of green jobs

ID: CI_JOBS_GREEN

Value: 18

Description: The number of green (successful) jobs on the CI engine. Green (or blue) jobs in CI define successful builds.

ITS issues updated last year

ID: ITS_UPDATED_1Y

Value: 434

Description: Number of issues updated during last year. If today is 2017-02-01 then the range is from 2016-02-01 to 2017-02-01.

Test coverage

ID: SQ_COVERAGE

Value:

Description: Overall test coverage.

Project authors one month

ID: PROJECT_AUTHORS_1M

Value:

Description: Total number of identities found as authors of commits in source code management repositories dated during the last month. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'author date' (when there is a difference between author date and committer date). Time range is measured as a one month period starting the day before the data retrieval (example: if retrieval is on Feb 3rd, period is from Jan 3rd to Feb 2nd, both included).

Contributing

ID: DOC_CONTRIBUTING

Value:

Description: Is the documentation info correctly filled in the PMI records? The project management infrastructure file holds information about various documentation and manuals. This test checks the number of doc-related entries defined in the PMI: build_doc, documentation, documentation_url, forums, gettingstarted_url, mailing_lists, website_url, wiki_url.

ITS authors last year

ID: ITS_AUTHORS_1Y

Value: 150

Description: Number of authors who created issues during last year. If today is 2017-02-01 then the range is from 2016-02-01 to 2017-02-01.

SCM Changed Lines one year

ID: SCM_MOD_LINES_1Y

Value: 841524

Description: Total number of changed lines (added, removed, changed) in source code management repositories dated during the last year. Source code management repositories are those considered as such in the project documentation. Date used for each commit is ‘author date’ (when there is a difference between author date and committer date). Time range is measured as a one year period starting the day before the data retrieval (example: if retrieval is on Feb 3rd 2016, period is from Feb 3rd 2015 to Feb 3rd 2016, both included).

Project authors one year

ID: PROJECT_AUTHORS_1Y

Value:

Description: Total number of identities found as authors of commits in source code management repositories dated during the last year. Source code management repositories are those considered as such in the project documentation. Date used for each commit is ‘author date’ (when there is a difference between author date and committer date). Time range is measured as a one year period starting the day before the data retrieval (example: if retrieval is on Feb 3rd 2016, period is from Feb 3rd 2015 to Feb 3rd 2016, both included).

DL access

ID: PROJECT_DL_ACCESS

Value: 1

Description: Is the access info (downloads, update sites..) correctly filled in the PMI records? The project management infrastructure file holds information about how to access binaries of the project. This test checks the number of access-related entries defined in the PMI: download_url, downloads, update_sites.

SCM committers one year

ID: SCM_COMMITTERS_1Y

Value: 21

Description: Total number of identities found as committers of commits in source code management repositories dated during the last year. Source code management repositories are those considered as such in the project documentation. Date used for each commit is ‘committer date’ (when there is a difference between author date and committer date). Time range is measured as a one year period starting the day before the data retrieval (example: if retrieval is on Feb 3rd 2016, period is from Feb 3rd 2015 to Feb 3rd 2016, both included).

Number of info issues

ID: SQ_VIOLATIONS_INFO

Value:

Description: The total number of issues (violations) found by SonarQube with a severity equal to INFO. For more information on maintainability metrics as computed by SonarQube, see <https://docs.sonarqube.org/display/SONAR/Metric+Definitions#MetricDefinitions-Issues>.

Public documented API (%)

ID: SQ_PUBLIC_API_DOC_DENSITY

Value:

Description: Density of public documented API = (Public API - Public undocumented API) / Public API * 100

Getting started

ID: PROJECT_GETTINGSTARTED_INFO

Value: 1

Description: Is the documentation info correctly filled in the PMI records? The project management infrastructure file holds information about various documentation and manuals. This test checks the number of doc-related entries defined in the PMI: build_doc, documentation, documentation_url, forums, gettingstarted_url, mailing_lists, website_url, wiki_url.

Maintainability rating

ID: SQ_SQALE_RATING

Value:

Description: Rating given to your project related to the value of your Technical Debt Ratio. The default Maintainability Rating grid is: A=0-0.05, B=0.06-0.1, C=0.11-0.20, D=0.21-0.5, E=0.51-1. The Maintainability Rating scale can be alternately stated by saying that if the outstanding remediation cost depends on the time that has already gone into the application: A <=5% , B between 6 to 10%, C between 11 to 20%, D between 21 to 50%, and anything over 50% is an E. For more information on maintainability metrics as computed by SonarQube, see <https://docs.sonarqube.org/display/SONAR/Metric+Definitions#MetricDefinitions-Maintainability>.

SCM Changed Lines one month

ID: SCM_MOD_LINES_1M

Value: 4156 (5 / 5)

Description: Total number of changed lines (added, removed, changed) in source code management repositories dated during the last month. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'author date' (when there is a difference between author date and committer date). Time range is measured as a one month period starting the day before the data retrieval (example: if retrieval is on Feb 3rd, period is from Jan 3rd to Feb 2nd, both included).

ITS Old open issues

ID: ITS_OPEN_OLD

Value: 0

Description: Number of dead issues, i.e. issues that are in state open and have not been updated for a long time (one year). It is considered to be good practice to keep this number low because it impacts the confidence in the Issue Tracking System if there are too many open dead issues. Some projects close issues after some time of inactivity and re-open it if needed.

Project committers

ID: PROJECT_COMMITTERS

Value:

Description: Total number of identities found as committers of commits in source code management repository. Source code management repositories are those considered as such in the project documentation. Commits in all branches are considered. Date used for each commit is 'committer date' (when there is a difference between author date and committer date). An identity is considered as committer if it appears as such in the commit record.

Last activity

ID: PROJECT_LAST_ACTIVITY_AT

Value:

Description: The date of last activity for this project. This includes any type of action: changes on issues, git commits or pushes, merge requests, comments. . . A project with a old last activity timestamp shows the project is dead (or in agony at least).

ITS issues created last year

ID: ITS_CREATED_1Y

Value: 434

Description: Number of issues created during last year. If today is 2017-02-01 then the range is from 2016-02-01 to 2017-02-01.

ITS issues updated last week

ID: ITS_UPDATED_1W

Value: 4

Description: Number of issues updated during last week. If today is Wed. 2017-02-01 then the range is from Wed. 2017-01-25 to Wed. 2017-02-01.

Number of stars

ID: PROJECT_STARS

Value:

Description: The number of times people have starred this project. Users use stars to show their interest for a project, and more stars usually mean a greater visibility and interest.

Number of statements

ID: SQ_STATEMENTS

Value:

Description: Number of statements. For Java, it is the number of statements as defined in the Java Language Specification but without block definitions. Statements counter gets incremented by one each time a following keyword is encountered: if, else, while, do, for, switch, break, continue, return, throw, synchronized, catch, finally.. Statements counter is not incremented by a class, method, field, annotation definition, package declaration and import declaration. For Cobol, a statement is one of move, if, accept, add, alter, call, cancel, close, compute, continue, delete, display, divide, entry, evaluate, exitProgram, goback, goto, initialize, inspect, merge, multiply, open, perform, read, release, return, rewrite, search, set, sort, start, stop, string, subtract, unstring, write, exec, ibmXmlParse, ibmXmlGenerate, readyReset, mfCommit, mfRollback.

ITS issues created last month

ID: ITS_CREATED_1M

Value: 33

Description: Number of issues created during last month. If today is 2017-02-01 then the range is from 2017-01-01 to 2017-02-01.

Number of functions

ID: SQ_FUNCS

Value:

Description: Number of functions. Depending on the language, a function is either a function or a method or a paragraph. For Java, constructors are considered as methods and accessors are considered as methods if the sonar.squid.analyse.property.accessors property is set to false. For Cobol, it is the number of paragraphs.

SCM Pull requests

ID: SCM_PRS

Value:

Description: Total number of Pull Requests (PRs) or Merge Requests (MRs) in source code management repositories. Source code management repositories are those considered as such in the project documentation.

SCM committers one month

ID: SCM_COMMITTERS_1M

Value: 6

Description: Total number of identities found as committers of commits in source code management repositories dated during the last month. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'committer date' (when there is a difference between author date and committer date). Time range is measured as a one month period starting the day before the data retrieval (example: if retrieval is on Feb 3rd, period is from Jan 3rd to Feb 2nd, both included).

MLS access

ID: PROJECT_MLS_ACCESS

Value: 1

Description: Is the communication channel for the team info correctly filled in the PMI records? The project management infrastructure file holds information about the various communication means used by the project. This test checks the number of MLS-related entries defined in the PMI: mailing lists, forums, etc.

ITS Pending issues

ID: ITS_OPEN_UNASSIGNED

Value: 0

Description: Number of issues in state open with no assignee (i.e. pending). It is considered to be good practice to keep this number low. In an active project, people would either work on the bug (i.e. assign it) or triage it (pass it to some other state or assigning it).

ITS access

ID: PROJECT_ITS_ACCESS

Value: 0

Description: Is the bugzilla info correctly filled in the PMI records? The project management infrastructure file holds information about one or more bugzilla instances. This test checks that at least one bugzilla instance is defined, with a product identifier, a create_url to enter a new issue, and a query_url to fetch all the issues for the project.

ITS Authors

ID: ITS_AUTHORS

Value: 4421

Description: Number of different authors who created issues during the lifetime of the project. A high number of authors shows diversity and improves the bus factor of the project.

User ML Posts

ID: MLS_USR_POSTS

Value: 14130

Description: The total number of posts found in the User mailing list. Having many posts shows the mailing list is active. It encourages people to participate, ask and answer questions.

Number of lines of code

ID: SQ_NCLOC

Value:

Description: Number of physical lines that contain at least one character which is neither a whitespace or a tabulation or part of a comment. For Cobol, generated lines of code and pre-processing instructions (SKIP1, SKIP2, SKIP3, COPY, EJECT, REPLACE) are not counted as lines of code.

ITS diversity ratio

ID: ITS_DIVERSITY_RATIO_1Y

Value: 2

Description: The ration of bugs divided by the number of submitters, over a period of one year.

User ML Posts one year

ID: MLS_USR_POSTS_1Y

Value: 1182

Description: The total number of posts found in the User mailing list during last year. Having many posts shows the mailing list is active. It encourages people to participate, ask and answer questions.

Number of red jobs

ID: CI_JOBS_RED

Value: 2

Description: The number of red (failed) jobs on the CI engine. Red jobs in CI define failed builds.

User ML Authors one year

ID: MLS_USR_AUTHORS_1Y

Value: 367

Description: The total number of different identities found in the User mailing list during last year. Having many different authors is a sign of diversity and activity. It makes the support more reliable (i.e. increased presence of people) and more complete (i.e. more eyes to solve a problem).

DL information

ID: PROJECT_DL_INFO

Value: 1

Description: Is the access info (downloads, update sites..) correctly filled in the PMI records? The project management infrastructure file holds information about how to access binaries of the project. This test checks the number of access-related entries defined in the PMI: download_url, downloads, update_sites.

ITS Late issues

ID: ITS_LATE

Value:

Description: Number of issues with a past due date. It is considered good practice to keep this number low. Either fix it or maintain its due date.

SCM authors one month

ID: SCM_AUTHORS_1M

Value: 6 (4 / 5)

Description: Total number of identities found as authors of commits in source code management repositories dated during the last month. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'author date' (when there is a difference between author date and committer date). Time range is measured as a one month period starting the day before the data retrieval (example: if retrieval is on Feb 3rd, period is from Jan 3rd to Feb 2nd, both included).

SCM Commits one year

ID: SCM_COMMITS_1Y

Value: 584

Description: Total number of commits in source code management repositories dated during the last year. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'author date' (when there is a difference between author date and committer date). Time range is measured as a one year period starting the day before the data retrieval (example: if retrieval is on Feb 3rd 2016, period is from Feb 3rd 2015 to Feb 3rd 2016, both included).

Line coverage

ID: SQ_COVERAGE_LINE

Value:

Description: Line test coverage.

Number of releases

ID: PROJECT_REL_VOL

Value: 52 (5 / 5)

Description: The number of releases recorded in the PMI. Milestones are retrieved from the PMI file and are counted whatever their target release is. Milestones are useful to assess the maturity of the release and improves predictability of the project's output, in terms of quality and time.

User ML Authors one month

ID: MLS_USR_AUTHORS_1M

Value: 28 (5 / 5)

Description: The total number of different identities found in the User mailing list during last month. Having many different authors is a sign of diversity and activity. It makes the support more reliable (i.e. increased presence of people) and more complete (i.e. more eyes to solve a problem).

ITS issues created last week

ID: ITS_CREATED_1W

Value: 4

Description: Number of issues created during last week. If today is Wed. 2017-02-01 then the range is from Wed. 2017-01-25 to Wed. 2017-02-01.

ITS issues updated last month

ID: ITS_UPDATED_1M

Value: 33 (4 / 5)

Description: Number of issues updated during last month. If today is 2017-02-01 then the range is from 2017-01-01 to 2017-02-01.

ITS authors last week

ID: ITS_AUTHORS_1W

Value: 4

Description: Number of authors who created issues during last week. If today is Wed. 2017-02-01 then the range is from Wed. 2017-01-25 to Wed. 2017-02-01.

User ML Threads one year

ID: MLS_USR_THREADS_1Y

Value: 470

Description: The total number of threads (one question followed by zero or more answers) found in the User mailing list during last year. Having many threads shows the mailing list is active. It encourages people to participate, ask and answer questions.

CI access

ID: PROJECT_CI_ACCESS

Value: 0

Description: Is the continuous integration info correctly filled in the PMI records? The project management infrastructure file holds information about the location of CI services. This test checks the number of ci-related entries defined in the PMI.

Total complexity

ID: SQ_CPX

Value:

Description: It is the complexity calculated based on the number of paths through the code. Whenever the control flow of a function splits, the complexity counter gets incremented by one. Each function has a minimum complexity of 1. This calculation varies slightly by language because keywords and functionalities do. For

more information on complexity for each language, see <https://docs.sonarqube.org/display/SONAR/Metrics+-+Complexity>.

Sqale Debt ratio

ID: SQ_SQALE_DEBT_RATIO

Value:

Description: The Technical Debt Ratio, as defined in Sqale. For more information on maintainability metrics as computed by SonarQube, see <https://docs.sonarqube.org/display/SONAR/Metric+Definitions#MetricDefinitions-Maintainability>.

SCM authors

ID: SCM_AUTHORS

Value: 312

Description: Total number of identities found as authors of commits in source code management repository. Source code management repositories are those considered as such in the project documentation. Commits in all branches are considered. Date used for each commit is 'author date' (when there is a difference between author date and committer date). An identity is considered as author if it appears as such in the commit record (for systems logging several identities related to the commit, authoring identity will be considered).

Readme

ID: DOC_README

Value:

Description: Is the documentation info correctly filled in the PMI records? The project management infrastructure file holds information about various documentation and manuals. This test checks the number of doc-related entries defined in the PMI: build_doc, documentation, documentation_url, forums, gettingstarted_url, mailing_lists, website_url, wiki_url.

Stack Overflow Answer rate (1Y)

ID: SO_ANSWER_RATE_1Y

Value: 0.46

Description: The average number of answers per questions related to the project's tag on Stack Overflow during the last year. Having many answers posted about the project indicates a strong interest from the community, and a good support. The list of questions and their answers associated to the tag can be browsed on the Stack Overflow web site.

Project committers one week

ID: PROJECT_COMMITTERS_1W

Value:

Description: Total number of identities found as committers of commits in source code management repositories dated during the last week. Source code management repositories are those considered as such in the project

documentation. Date used for each commit is 'committer date' (when there is a difference between author date and committer date). Time range is measured as a one week period starting the day before the data retrieval.

Branch coverage

ID: SQ_COVERAGE_BRANCH

Value:

Description: Branch test coverage.

SCM Closed Pull requests

ID: SCM_PRS_CLOSED

Value:

Description: Total number of Pull Requests (PRs) or Merge Requests (MRs) in the closed state in source code management repositories.

Stack Overflow Views (5Y)

ID: SO_VIEWS_VOL_5Y

Value: 412367

Description: The total number of views for questions related to the project's tag on Stack Overflow during the last 5 years. Having many views on questions about the project indicates a strong interest from the community. The list of questions and their answers associated to the tag can be browsed on the Stack Overflow web site.

MLS information

ID: PROJECT_MLS_INFO

Value: 1

Description: Is the communication channel for the team info correctly filled in the PMI records? The project management infrastructure file holds information about the various communication means used by the project. This test checks the number of MLS-related entries defined in the PMI: mailing lists, forums, etc.

User ML Posts one week

ID: MLS_USR_POSTS_1W

Value: 5

Description: The total number of posts found in the User mailing list during last week. Having many posts shows the mailing list is active. It encourages people to participate, ask and answer questions.

Number of failed jobs one week

ID: CI_JOBS_FAILED_1W

Value: 2 (4 / 5)

Description: The number of jobs that failed during last week on the CI engine.

Number of blocker issues

ID: SQ_VIOLATIONS_BLOCKER

Value:

Description: The total number of issues (violations) found by SonarQube with a severity equal to BLOCKER. For more information on maintainability metrics as computed by SonarQube, see <https://docs.sonarqube.org/display/SONAR/Metric+Definitions#MetricDefinitions-Issues>.

SCM Commits

ID: SCM_COMMITS

Value: 34677

Description: Total number of commits in source code management repositories. Source code management repositories are those considered as such in the project documentation. Date used for each commit is 'author date' (when there is a difference between author date and committer date).

Public API

ID: SQ_PUBLIC_API

Value:

Description: Number of public Classes + number of public Functions + number of public Properties

Attributes

Mnemo	Value
QM_ACTIVITY	4.40
QM_DIVERSITY	4.30
QM_DOC	4.20
QM_ECOSYSTEM	4.50
QM_PROCESS	4.20
QM_PRODUCT	3.00
QM_QUALITY	3.90
QM_RELIABILITY	3.00
QM_REL_ENG	4.50
QM_SCM	4.00
QM_SUPPORT	4.70

Activity

ID: QM_ACTIVITY

Value: 4.4 / 5

Description: The activity of the project's ecosystem, as measured on the mailing lists and configuration management system. An active project will provide a lot of information on the mailing lists, so when an user encounters an issue she will quickly find the information she needs, and has more chances to get answers if she asks. Fixes and improvements are added regularly.

Diversity

ID: QM_DIVERSITY

Value: 4.3 / 5

Description: The diversity of the project's ecosystem, as measured on the mailing lists and configuration management system. If many different actors from different companies are involved in the project, then it improves its sustainability (by eliminating a single point of failure) and adaptability to different situations. Having developers and users with different contexts and perspectives on the project helps widening its scope and provide a more generic support.

Documentation

ID: QM_DOC

Value: 4.2 / 5

Description: The maturity of code. Good code is vital for maintenance and evolution. It will encourage people to contribute, lower the number of bugs, and make a better product for the end-user as well as for the maintainers.

Ecosystem

ID: QM_ECOSYSTEM

Value: 4.5 / 5

Description: The sustainability of the ecosystem evolving around the project. Sustainability is a key point for long term support. If there is a lot of activity, if people can get fast and complete answers, if many people from different companies contribute to the project, then it will have more chance to still be there in a few years, and to continue providing fixes and improvements. Ecosystem requirements have been discussed on the mailing list and during meetings, and have been further described on the Polarsys wiki.

Process

ID: QM_PROCESS

Value: 4.2 / 5

Description: The maturity of the process used to run the project. A sound process helps people to do things right and ease collaborative work. If the process is documented, has predictable output, helps enforcing good development practices, etc. then new comers will easily find the information to collaborate, test or change code, or participate in the community. A good process also helps producing a good product [[Ing2003](/documentation/references.html#Ing2003)] – although it is agreed that the process is not enough by itself. Process requirements have been discussed on the mailing list and during meetings, and have been further described on the Polarsys wiki. Some may also recognise CMMi Key Process Areas among the attributes.

Product

ID: QM_PRODUCT

Value: 3 / 5

Description: The maturity of the product itself, from the code perspective. Considering the vast amount and diversity of the projects under the Eclipse umbrella, there must be no single definition of quality to fit them all. However, Eclipse has some recommended practices and concerns about product quality. Projects are then expected to extend this foundation. Major concerns identified for Eclipse products quality are linked to the development context of the foundation (open source, very large code base and thousands of contributor worldwide), and its architecture (modular stacks of components). It must be highlighted that product quality is not clearly defined on the public wiki, neither for its definition nor for how it may be assessed. Furthermore, almost all product-related rules (with a few exceptions, like for packages naming) are optional guidelines. . Ecosystem requirements have been discussed on the mailing list and during meetings, and have been further described on the Polarsys wiki.

Eclipse Maturity

ID: QM_QUALITY

Value: 3.9 / 5

Description: The overall Maturity of the project. In the context of embedded software, Maturity is usually associated with some kind of reliability (most bugs have been already found) and functionality of code, sustainability of the project (will it still deliver fixes and improvements in a few years), and process predictability. Maturity in the PolarSys context has been further described on the wiki, and is actually precisely defined by the decomposition of this quality model.

Reliability

ID: QM_RELIABILITY

Value: 3 / 5

Description: The Reliability of code, as defined in ISO-9126.

Build and Release Management

ID: QM_REL_ENG

Value: 4.5 / 5

Description: Does the project apply best practices regarding Build and Release management?

Configuration Management

ID: QM_SCM

Value: 4 / 5

Description: The maturity of the project regarding access and usage of the configuration management system. Configuration management is an essential part of the collaboration in the project. Access to the source should be documented and facilitated for new comers to easily come in.

Support

ID: QM_SUPPORT

Value: 4.7 / 5

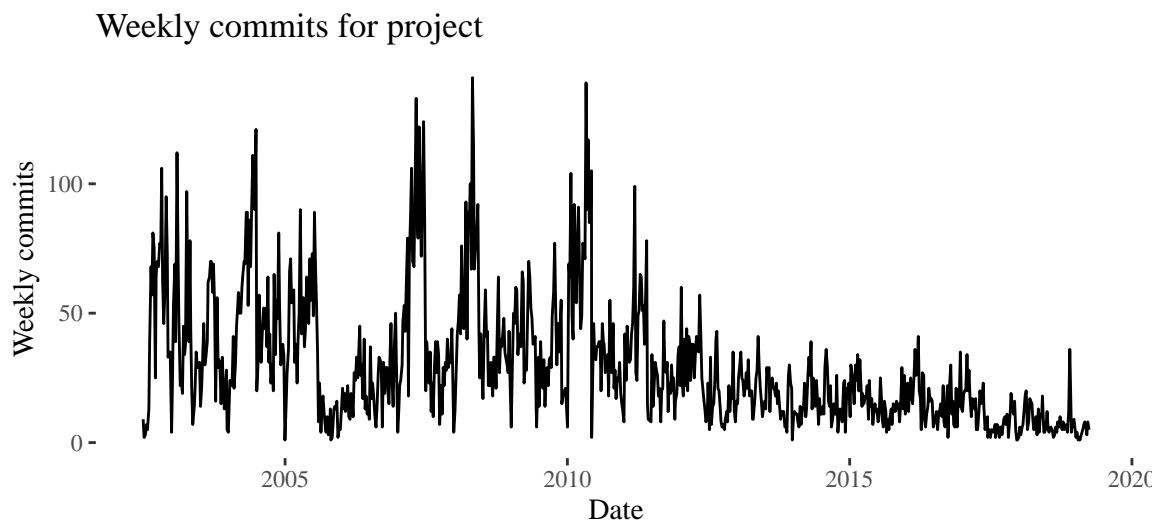
Description: The amount of knowledge provided when someone asks for support. Having many answers on a single question helps better understand how the product works in different conditions, and also provides help for people looking for a similar information later on, since mailing lists are archived and public.

Git analysis

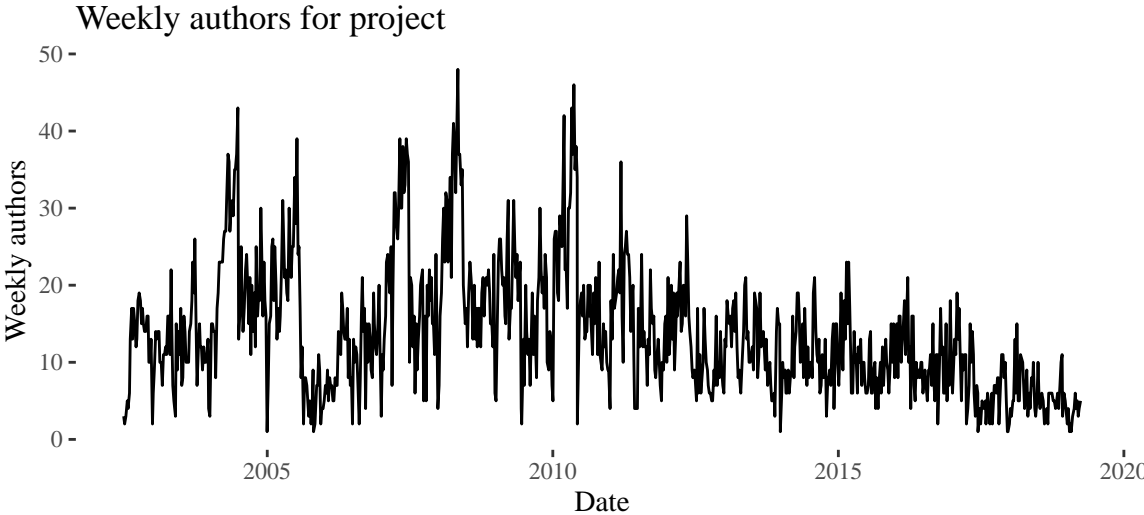
The repository contains a total of 25960 commits made by 312 authors. The first commit was made on the 2002-06-26 and the last analysed commits was made on 2019-03-30.

During the last month, there has been 36 commits made by 6 authors.

Weekly commits



Weekly authors



Based on data from Alambic