Social Smells: : **CHEAT SHEET**

About

The social_smells_showcase.Rmd vignette introduces the social smell metrics of Kaiaulu, including git log and communication parsing and community detection algorithms.

Social Smell: Sub-optimal code in software projects attributed to communication issues.

Project Config Setup

The first part of running any vignette is setting up your project configuration file (examples in kaiaulu/conf).

Required Fields

- **project:**
  - **website**
  - **openhub**
- **version_control :**
  - **log**
  - **log_url**
  - **branch**
- **mailing_list:**
  - **mbox**
  - **domain**
  - **list_key**
- **analysis:**
  - **window:**
    - **start_commit**
    - **end_commit**
    - **size_days**

Optional Fields

- **issue_tracker:**
  - **jira:**
    - **domain**
    - **project_key**
    - **issues**
    - **issue_comments**
  - **github:**
    - **owner**
    - **repo**
    - **replies**
  - **bugzilla:**
    - **site_url**
    - **datetime**
    - **limit**
    - **replies**

The file "tools.yml" must also be configured. See README.md for more information on 3rd party software dependencies.

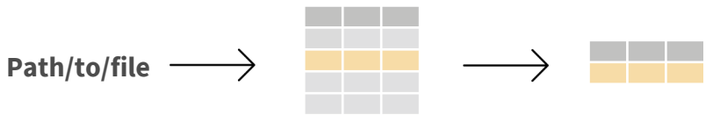
Required Fields:

- **perceval (version 0.12.24)**
- **oslom_dir**
- **oslom_undir**

Functions

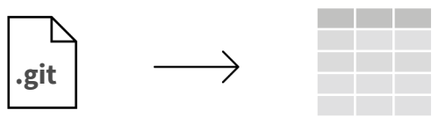
filter_by_file_extension() & filter_by_filepath_substring()

Two ways to filter a table. The former function keeps only rows with filepaths containing the specified extension. The latter function keeps only rows with filepaths that do not contain the specified substring. Both return a filtered table.



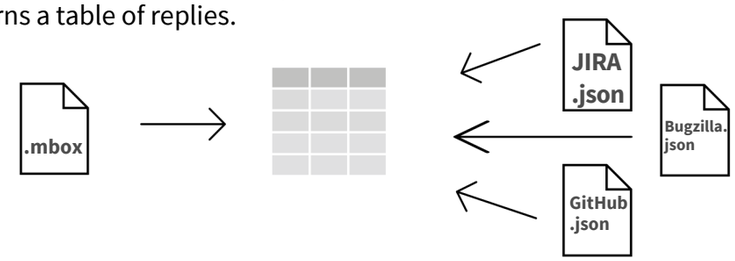
parse_gitlog()

Parses a git log, which is the hidden ".git "file in a GitHub repository containing a record of commits for the repo. Returns a table with relevant fields for the git log.



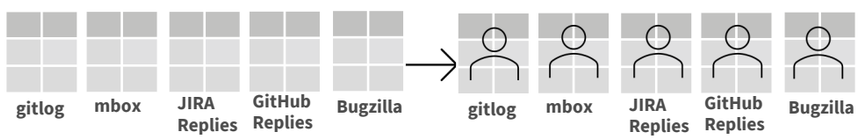
parse_mbox(), parse_jira_replies(), parse_github_replies(), parse_bugzilla_rest_comments()

Parses an mbox, a file which stores emails in a mailbox, and issue comments from JIRA, GitHub, & Bugzilla respectively if available. Returns a table of replies.



identity_match()

Links users in the data (parse_gitlog, parse_mbox, parse_jira_replies, parse_github_replies, parse_bugzilla_rest_comments) by overlapping partial information.



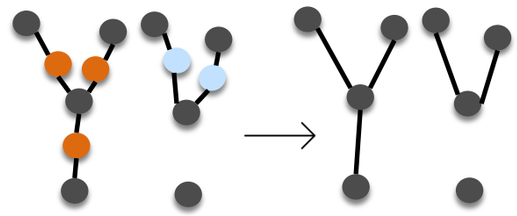
Related Vignettes

If you choose to do Social Smell analysis, you must run the following vignettes to download the necessary communication data first depending on what the project uses:

1. **download_mod_mbox.Rmd**
2. **download_jira_data.Rmd**
3. **download_github_comments.Rmd**
4. **download_bugzilla.Rmd**
5. **social_smell_showcase.Rmd**

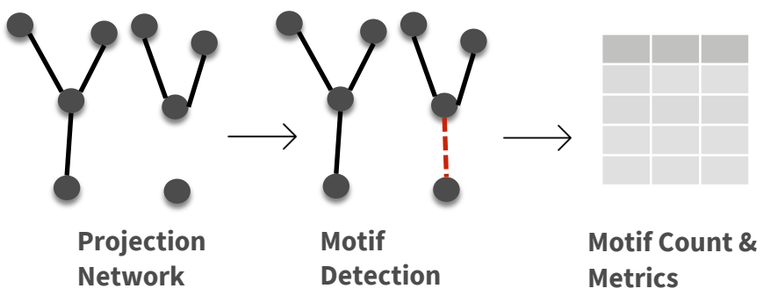
bipartite_graph_projection()

Applies a graph projection on a bipartite network.



smell_organizational_silo(), smell_missing_links(), smell_sociotechnical_congruence(), ...

Computes the appropriate social metric given communication and collaboration graphs.



 • Learn more with the social_smells_showcase.Rmd vignette • Kaiaulu package version 0.0.0.9600 (in development) • Updated: 2023-02