Sub-category	No.	Feature Indicator	Description	Reference
	f1	repo_age	How long the project has existed on GitHub (in years)	[1]
Project Maturity	f2	repo_has_org*	Whether the type of owner of the project is an organization	
	f3	repo_contributors*	Number of contributors to the project	
	f4	repo_subscribers*	Number of subscribers to the project	
	f5	repo_num_open_issue*	Number of open issues that existed at the time of issue creation for the project	
	f6	repo_open_delta	Time interval (in hours) between the issue creation and the closing date of the previous issue	[1]
	f7	repo_closed_issue_time*	Average length of time (in days) that the project has had issues closed at the time of issue creation	
	f8	repo_num_commits_inproject	Number of commits created in the project in the three months prior to issue creation	[2]
	f9	repo_num_commits_project_T	Number of commits in the project during the period of 2 weeks before the issue creation until the observation point T	[2]
Project Activity	f10	repo_num_issues_created_inproject	Number of issues created in the project during the three months prior to issue creation	[2]
	f11	repo_num_issues_created_inproject_closed	Number of issues created and closed in the project in the three months prior to issue creation	[2]
	f12	repo_num_issues_created_projected_T	Number of issues created in the project during the period of 2 weeks before the issue creation until the observation point T	[2]
	f13	repo_num_issues_created_project_closed_T	Number of issues created and closed in the project during the period of 2 weeks before the issue creation until the observation point T	[2]
	f14	repo_team_size	Number of core developers in the project that closed issues during the three months prior to issue creation	[3]
	f15	issue_has_task_type*	Whether the issue is considered to have a clear task type	
Issue Content	f16	issue_num_labels_T	Number of labels added before the observation point T	[2]
	f17	issue_text_similarity*	Score of the Highest similarity of issues to previously closed issues within the project	
	f18	issue_has_pr	Is an issue a Pull Request	[4]
	f19	issue_cleaned_body_len	Length of the combined title and body with markdown parsed and tags removed	[2]
	f20	issue_num_codes	Number of code snippets in the title and body of an issue	[5]
	f21	issue_num_urls	Number of URLs in the title and body of an issue	[5]
Issue Complexity	f22	issue_num_pics	Number of images in the title and body of an issue	[5]
	f23	issue_flesch_reading_ease	Readability score (in Flesch Reading Ease) for the title and body of an issue	[5]
	f24	issue_on_rest_day	Whether the issue was created on the weekend	[1]
	f25	issue_has_at_tag	Whether the "@" tag exists in the title and body of an issue	[3]
	f26	issue_has_conflict	Whether the keyword "conflict" exists in the title and body of an issue	[3]
	f27	issue_desc_positivity	Positive sentiment score of the title and body of an issue	[4]
Issue Sentiment	f28	issue_desc_negativity	Negative sentiment score of the title and body of an issue	[4]
	f29	issue_desc_pos_polarity	Polarity sentiment score of the title and body of an issue	[4]
	f30	issue_desc_subjectivity	Subjective sentiment score of the title and body of an issue	[4]
	f31	issue_hotness_T	the hotness of an issue at the observation point T	[6]
	f32	issue_num_comments_T	Number of comments issue has received before the observation point T	[2]
	f33	issue_mean_comment_size_T	Average comment size of the comments received before the observation point T	[2]
	f34	issue_has_core_comment_T	Whether the question has comments from a core developer other than the creator efore the observation point T	[3]
Issue Activity	f35	issue_has_other_comment_T	Whether the question has comments from non-core developer other than the creator efore the observation point T	[3]
	f36	issue_per_event_days_T*	Average number of events per day for the issue at the observation point T	
	f37	issue_num_assignments_T	Number of assignment events before he observation point T	[2]
	f38	issue_num_referenced_by_T	Number of times the issue was mentioned in commit messages using the issue id, before the observation point T	[2]
	f39	issue_num_subscribedby_T	Number of persons subscribing to receive updates on the issue before the observation point T	[2]
	f40	issue_num_actors_T	Number of unique persons who have commented, referenced, or subscribed to the issue before the observation point T	[2]

Sub-category	No.	Feature Indicator	Description	Reference
Influence characteristics of creators	f41	creator_age*	How long the creator has existed on GitHub (in years)	
	f42	creator_has_org*	Whether the creator belongs to an organization	
	f43	creator_followers*	Number of followers of the creator	
	f44	creator_newcomer*	Whether the creator is a newcomer to the project	
	f45	creator_core_member	Whether the creator is a core developer of the project	[3]
Behavior characteristics of creators	f46	creator_num_comments_T*	Number of comments by the issue creator before the observation point T	
	f47	creator_comments_positive_T	Positive sentiment score of the comments of the creators before the observation point T	[3]
	f48	creator_comments_negative_T	Negative sentiment score of the comments of the creators before the observation point T	[3]
	f49	creator_first_issue*	Whether the issue is the first issue created by the creator within the project	
	f50	creator_num_issues_inproject	Number of issues created by the issue creator in the three months prior to issue opening	[2]
	f51	creator_num_issues_closed_inproject	Number of issues created by the issue creator that were closed in the three months prior to issue opening	[2]
	f52	creator_num_issue_closed_ inproject_T*	Number of issues created by the issue creator that were closed during the period of 2 weeks before the issue creation until the observation point T	
	f53	creator_issue_closed_days_T*	Average length of closing time (in days) that issues created by the issue creator that were closed during the period of 2 weeks before the issue creation until the observation point T	
	f54	creator_num_commits_inproject	Number of total commits to the issue repository by the issue creator in the three months before the issue opening	[2]
	f55	creator_num_commits_inproject_T*	Number of total commits to the issue repository by the issue creator during the period of 2 weeks before the issue creation until the observation point T	
Influence characteristics of participants	f56	participant_first_core_member*	Whether the first participant is the core developer of the project	
	f57	participant_num_T*	Number of all participants in the issue before the observation point T	
	f58	participant_association_score_T*	Average association score of participants in the issue before the observation point T	
Behavior characteristics of participants	f59	participant_first_occured_T	Whether the issue has a first participant at the observation point T	[3]
	f60	participant_num_comments_T*	Number of comments of all participants in the issue before the observation point T	
	f61	participant_num_commits_T	Total number of commits done by all participants to the project repository during the period from two weeks before the issue creation to observation point T.	[2]
	f62	participant_num_unique_actors_by_ commits _T	Total number of unique participants who committed code to the project repository during the period from two weeks before the issue creation to observation point T.	[2]

NOTE: Features marked with _T are those whose values may change over observation time.
Features marked without * have been proposed in previous studies, while those with * are novel additions to the existing literature.

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