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Drive-by Curation

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Potential competing interests: No potential competing interests to declare.

A drive-by curation is when an external contributor submits a small, proactive, actionable change to a curated resource such as an ontology or database.

On a technical level, drive-by curations are typically only possible for resources that store their data in a simple, non-proprietary file format within a public version control system. On a social level, drive-by curations are more likely to be accepted by resources that additionally have explicit contribution guidelines and governance.

Examples

A researcher notices a typo in the definition of a Gene Ontology term when following up on a gene set enrichment analysis they ran. They navigate to the Gene Ontology's version-controlled [repository on GitHub](#), where the single source of truth for the ontology is stored as a [file](#) in the OBO text format. The researcher first either forks the repository or uses GitHub's web-based interface to edit the file, then second creates a pull request. Later, maintainers of the Gene Ontology see the pull request, identify the change is non-controversial, thank the drive-by curator, and merge the improvement so all users of the Gene Ontology can benefit.

Wikidata has a notable infrastructure that allows users to live-edit the content of the database. Even though the content isn't stored in a typical version control system, it maintains provenance on several levels (e.g., who edited the content, what changes were made, and what the justifications were for editing).

Counterexamples

A user of an ontology requesting a new term via a public issue tracker not qualify as a drive-by curation because it is not actionable. Such feedback is valuable and can lead to the improvement of the ontology, but it must be done by the ontology's maintainers.

A user who has more systematic changes in mind that require several iterations of pull requests (while potentially valuable) is also no longer considered a drive-by curation, as the effort is much higher.

Perspective

Most curated resources don't have funding nor interest to continue their maintenance. This is even true for many well-funded institutions who have positioned themselves as being trustworthy/sustainable. Enabling drive-by curations in a



curated resource is a way to improve its sustainability as well as gain an oversized benefit from potential external contributors.