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Automating Metadata Handling in Research Software Engineering

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Automating Metadata Handling in Research Software Engineering
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Modern research is heavily dependent on software. The landscape of research software engineering is evolving at a high pace, and the effective handling of metadata plays a pivotal role in ensuring software discoverability, reproducibility, and general project quality. Properly curating metadata can, however, become a time-consuming task, while manual curation is error-prone at the same time. This poster introduces two new tools for streamlining metadata management: somesy and fair-python-cookiecutter.

Somesy (**so**ftware **me**tadata **sy**nchronization) provides a user-friendly command-line interface that assists in the synchronization of software project metadata. Somesy supports best-practice metadata standards such as CITATION.cff and CodeMeta and automatically maintains metadata, such as essential project information (names, versions, authors, licenses), consistently across multiple files. This ensures metadata integrity and frees additional time for developers and maintainers to focus on their work.

The fair-python-cookiecutter is a GitHub repository template which provides a structured foundation for Python projects. The template provides researchers and RSEs with support in meeting the increasing demands for software metadata during development of Python tools and libraries. By cloning and applying the template to their projects, developers can benefit from the incorporated best practices, recommendations for software development, and software project metadata to ensure quality and facilitate citation of their work. The fair-python-cookiecutter is aligned with and inspired by standards like DLR Software Engineering Guidelines, OpenSSF Best Practices, REUSE, CITATION.cff, CodeMeta. Furthermore, it uses **somesy** to enhance software metadata FAIRness. The template comes with detailed documentation and thus offers an accessible framework for achieving software quality and discoverability within academia.

https://pypi.org/project/somesy/
https://github.com/Materials-Data-Science-and-Informatics/fair-python-cookiecutter

Please assign your contribution to one of the following topics

Technological solutions for findable and machine-readable metadata

Please specify ”other” (stakeholder)

HMC core staff

In addition please add keywords.

FAIR, metadata, python

Please assign yourself (presenting author) to one of the stakeholders.

other (please specify)

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