

Reviewer Report

Title: Workflow sharing with automated metadata validation and test execution to improve the reusability of published workflows

Version: Revision 1 **Date: 11/22/2022**

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Reviewer Comments to Author:

The reading of the revised paper would have been easier by providing updates in a different color but thank you for taking into account the comments and remarks, and clearly answering the raised issues. I also appreciated the extension of the discussion.

However, I still have some concerns regarding the proposed approach.

The proposed platform targets both workflow sharing and testing. It is explicitly stated in the abstract: "the validation and test are based on the requirements we defined for a workflow being reusable with confidence". It is clear in the paper that tests are realized through the GitHub CI infrastructure, possibly delegated to a WES workflow execution engine. Although I inspected Figure 3 as well as the wf_params.json and wf_params.yml provided in the demo website. It doesn't seem to be enough to answer questions such as: how are specified tests ? How can a user inspect what has been done during the testing process ? What is evaluated by the system to assess that a test is successful ?

I tried to understand what was done during the testing process but the test logs are not available anymore ([Add workflow: human-reseq: fastqSE2bam - ddbj/workflow-registry@19b7516 - GitHub](<https://github.com/ddbj/workflow-registry/actions/runs/2257134260>))

Regarding the findability of the workflows, in line with FAIR principles, the discussion mentions a possible solution which would consist in hosting and curating metadata in another database. To tackle workflow discoverability between multiple systems, accessible on the web, we could expect that the Yevis registry exposes semantic annotations, leveraging Schema.org (or any other controlled vocabulary) for instance. This would also make sense since EDAM ontology classes are referred to in the Yevis metadata file (<https://ddbj.github.io/workflow-registry-browser/#/workflows/65bc3bd4-81d1-4f2a-8886-1fbe19011d81/versions/1.0.0>).

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