



Artifact Evaluation

ICSE 2022

Call For Artifact Submissions






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Attention: To ease our review process, we recommend authors use one of the two styles to running your artifacts, both are Ubuntu 20.04 (amd64):

- Based on a virtual machine (username & password:
icse22ae): <https://cowtransfer.com/s/c07faf79207545>
([https://urldefense.com/v3/__https://cowtransfer.com/s/c07faf79207545__;!!PvXuogZ4sRB2p-tUIXpgUDiuRa0r97muh4NMURK4PHg9-wpvdC-eeOwMHBsL1ld3hOUu2pThBax00jQ\\$](https://urldefense.com/v3/__https://cowtransfer.com/s/c07faf79207545__;!!PvXuogZ4sRB2p-tUIXpgUDiuRa0r97muh4NMURK4PHg9-wpvdC-eeOwMHBsL1ld3hOUu2pThBax00jQ$)) code
(optional): vx6qz
- Based on a docker: <https://hub.docker.com/layers/ubuntu/library/ubuntu/20.04/images/sha256-57df66b9fc9ce2947e434b4aa02dbe16f6685e20db0c170917d4a1962a5fe6a9>
([https://urldefense.com/v3/__https://hub.docker.com/layers/ubuntu/library/ubuntu/20.04/images/sha256-57df66b9fc9ce2947e434b4aa02dbe16f6685e20db0c170917d4a1962a5fe6a9__;!!PvXuogZ4sRB2p-tUIXpgUDiuRa0r97muh4NMURK4PHg9-wpvdC-eeOwMHBsL1ld3hOUu2pTg6Rx3C-A\\$](https://urldefense.com/v3/__https://hub.docker.com/layers/ubuntu/library/ubuntu/20.04/images/sha256-57df66b9fc9ce2947e434b4aa02dbe16f6685e20db0c170917d4a1962a5fe6a9__;!!PvXuogZ4sRB2p-tUIXpgUDiuRa0r97muh4NMURK4PHg9-wpvdC-eeOwMHBsL1ld3hOUu2pTg6Rx3C-A$))

In either case, please ensure any third party library installations are included in your steps.

The artifact evaluation track aims to review, promote, share, and catalog the research artifacts of accepted software engineering papers. Authors of papers accepted to the Technical/SEIP/NIER/SEET/SEIS Tracks are can submit an artifact for the Artifacts Evaluated (<https://2021.esec-fse.org/track/fse-2021-artifacts#evaluated>) and Artifacts Available (<https://2021.esec-fse.org/track/fse-2021-artifacts#available>) badges. Authors of any prior SE work (published at ICSE or elsewhere) are also invited to submit their work for the Results Validated (<https://2021.esec-fse.org/track/fse-2021-artifacts#validated>) badges. Definitions for the badges are given in the table below, taken from ACM Artifact Review and Badging Version 1.1 (<https://www.acm.org/publications/policies/artifact-review-and-badging-current>).

Artifacts Evaluated		Artifacts Available	Results Validated	
Functional	Reusable	Available	Reproduced	Replicated
				

<p>The artifacts associated with the research are found to be documented, consistent, complete, exercisable, and include appropriate evidence of verification and validation.</p>	<p>Functional + The artifacts associated with the paper are of a quality that significantly exceeds minimal functionality. That is, they have all the qualities of the Artifacts Evaluated – Functional level, but, in addition, they are very carefully documented and well-structured to the extent that reuse and repurposing is facilitated. In particular, norms and standards of the research community for artifacts of this type are strictly adhered to.</p>	<p>Author-created artifacts relevant to this paper have been placed on a publicly accessible archival repository. A DOI or link to this repository along with a unique identifier for the object is provided.</p>	<p>The main results of the paper have been obtained in a subsequent study by a person or team other than the authors, using, in part, artifacts provided by the author.</p>	<p>The main results of the paper have been independently obtained in a subsequent study by a person or team other than the authors, without the use of author-supplied artifacts.</p>
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Important Dates

- Jan 21, 2022: Artifact abstract deadline.
- Jan 28, 2022: Artifact submissions deadline.
- Jan 29 - Feb 8, 2022: First Review period.
- Feb 8 - Feb 18, 2022: Second Review period.
- Feb 25, 2022: Notifications.

Best Artifact Awards

There will be two ICSE 2022 Best Artifact Awards to recognize the effort of authors creating and sharing outstanding research artifacts.

Submission for Replicated and Reproduced Badges

For “replicated” and “reproduced” badges, authors will need to offer appropriate documentation that their artifacts have reached that stage.

By January 21, 2022 register your research artifact at the ICSE 2022 Hotcrp (<https://icse2022-artifact.hotcrp.com/>) site by submitting a two pages (max) abstract in PDF format describing your artifact.

The abstract should include the paper title, the purpose of the research artifact, the badge(s) you are claiming, and the technology skills assumed by the reviewer evaluating the artifact. Please also mention if running your artifact requires specific Operating Systems or other environments.

- **TITLE:** A (Partial)? (Replication|Reproduction) of XYZ . Please add the term partial to your title if only some of the original work could be replicated/reproduced.
- **WHO:** name the original authors (and paper) and the authors that performed the replication/reproduction. Include contact information and mark one author as the corresponding author. **IMPORTANT** : include also a web link to a publically available URL directory containing (a) the original paper (that is being reproduced) and (b) any subsequent paper(s)/documents/reports that do the reproduction.
- **WHAT:** describe the “thing” being replicated/reproduced;
- **WHY:** clearly state why that “thing” is interesting/important;
- **HOW:** say how it was done first;
- **WHERE:** describe the replication/reproduction. If the replication/reproduction was only partial, then explain what parts could be achieved or had to be missed.
- **DISCUSSION** (if applicable): What aspects of this “thing” made it easier/harder to replicate/reproduce. What are the lessons learned from this work that would enable more replication/reproduction in the future for other kinds of tasks or other kinds of research.

Two PC members will review each abstract, possibly reaching out to the authors of the abstract or original paper. Abstracts will be ranked as follows.

- If PC members do not find sufficient substantive evidence for replication/reproduction, the abstract will be rejected.
- Any abstract that is judged to be unnecessarily critical towards others in the research community will be rejected (*).
- The remaining abstracts will be sorted according to (a) how interesting they are to the community and (b) their correctness.
- The top ranked abstracts will be invited to give lightning talks.

(*) Please note that our goal is to foster a positive environment that supports and rewards researchers for conducting replications and reproductions. To that end, it is important to encourage an atmosphere where presentations pay due respect to both work that is being reproduced/replicated and reproductions/replications. Criticism of other work related to the reproduction/replication is acceptable only as part of a balanced and substantive discussion of prior accomplishments.

Submission for Evaluated and Available Badges

Only authors of papers accepted to the 2022 Technical/SEIP/NIER/SEET/SEIS Tracks can submit candidate reusable or available artifacts.

By January 21, 2022 register your research artifact at the ICSE 2022 Hotcrp (<https://icse2022-artifact.hotcrp.com/>) site by submitting a two pages (max) abstract in PDF format describing your artifact.

For the reusable and available badges, authors must offer “download information” showing how reviewers can access and execute (if appropriate) their artifact.

Authors must perform the following steps to submit an artifact:

1. Prepare the artifact
2. Making the artifact available
3. Documenting the artifact
4. Submit the artifact

1. Prepare the artifact

There are two options depending on the nature of the artifacts: Installation Package or Simple Package. In both cases, the configuration and installation for the artifact should take **less than 30 minutes**. Otherwise, the artifact is unlikely to be endorsed simply because the committee will not have sufficient time to evaluate it.

Installation Package. If the artifact consists of a tool or software system, then the authors need to prepare an installation package so that the tool can be installed and run in the evaluator's environment. Provide enough associated instruction, code, and data such that some CS person with a reasonable knowledge of scripting, build tools, etc. could install, build, and run the code. If the artifact contains or requires the use of a special tool or any other non-trivial piece of software the authors must provide a VirtualBox VM image or a Docker container image with a working environment containing the artifact and all the necessary tools.

We expect that the artifacts have been vetted on a clean machine before submission.

Simple Package. If the artifact only contains documents which can be used with a simple text editor, a PDF viewer, or some other common tool (e.g., a spreadsheet program in its basic configuration) the authors can just save all documents in a single package file (zip or tar.gz).

2. Making the artifact available

The authors need to make the packaged artifact (installation package or simple package) available so that the Evaluation Committee can access it. We suggest a link to a public repository or to a single archive file in a widely available archive format.

If the authors are aiming for the badges “**available**” and beyond the artifact needs to be publicly accessible. In other cases, the artifacts do not necessarily have to be publicly accessible for the review process. In this case, the authors are asked to provide a private link or a password-protected link. In either case, we encourage authors to ensure that artifact can be accessed with link only (e.g., no registration is necessary).

3. Documenting the artifact

The authors need to write and submit a documentation explaining how to obtain the artifact package, how to unpack the artifact, how to get started, and how to use the artifacts in more detail. The artifact submission must only describe the technicalities of the artifacts and uses of the artifact that are not already described in the paper.

The submission should contain the following documents (in plain text or pdf format) in a zip archive:

- **A README** main file describing what the artifact does and where it can be obtained (with hidden links and access password if necessary). Also, there should be a clear description how to repeat/replicate/reproduce the results presented in the paper. Artifacts which focus on data should, in principle, cover aspects relevant to understand the context, data provenance, ethical and legal statements (as long as relevant), and storage requirements. Artifacts which focus on software should, in principle, cover aspects relevant to how to install and use it (and be accompanied by a small example).
- **A REQUIREMENTS** file for artifacts which focus on software. This file should, in principle, cover aspects of hardware environment requirements (e.g., performance, storage or non-commodity peripherals) and software environments (e.g., Docker, VM, and operating system) but also, if relevant, a requirements.txt with explicit versioning information (e.g. for Python-only environments). Any deviation from standard environments needs to be reasonably justified.
- **A STATUS** file stating what kind of badge(s) the authors are applying for as well as the reasons why the authors believe that the artifact deserves that badge(s).
- **A LICENSE** file describing the distribution rights. Note that to score “available” or higher, then that license needs to be some form of open source license. Details also under the respective badges and the ICSE 2021 open science policy.

- **An INSTALL** file with installation instructions. These instructions should include notes illustrating a very basic usage example or a method to test the installation. This could be, for instance, on what output to expect that confirms that the code is installed and working; and the code is doing something interesting and useful. A copy of the accepted paper in pdf format.

4. Submit the artifact

By January 21, 2022 register your research artifact at the ICSE 2022 Hotcrp (<https://icse2022-artifact.hotcrp.com/>) site by submitting an abstract describing your artifact. The abstract should include the paper title, the purpose of the research artifact, the badge(s) you are claiming, and the technology skills assumed by the reviewer evaluating the artifact. Please also mention if running your artifact requires specific Operation Systems or other environments.

By January 28, 2021 complete your submission by making sure that all the content related to the actual artifact is available.

The Evaluation Committee may contact the authors within the Rebuttal Period to request clarifications on the basic installation and start-up procedures or to resolve simple installation problems. Information on the rebuttal phase are provided in the Submission and Reviewing Guidelines. Instructions will further be sent to the authors (and reviewers) along the reviewing process.

Given the short review time available, the authors are expected to respond within a 48-hour period. Authors may update their research artifact after submission only for changes requested by reviewers in the rebuttal phase. Author submitting an open source repository link, are expected to give a tag to time-stamp your submission.

Review Guidelines

For PC members, please refer to these guidelines of ESEC/FSE'2021 for artifacts evaluation process: https://2021.esec-fse.org/getImage/orig/fse_artifacts_submission_reviewing_guidelines.pdf (https://2021.esec-fse.org/getImage/orig/fse_artifacts_submission_reviewing_guidelines.pdf)

Finally, further information will be constantly made available on the website

<https://conf.researchr.org/track/icse-2022/icse-2022-artifact-evaluation> (<https://conf.researchr.org/track/icse-2022/icse-2022-artifact-evaluation>)

In case of questions, please do not hesitate contacting the chairs.

Program Committee (<https://conf.researchr.org/committee/icse-2022/icse-2022-artifact-evaluation-program-committee>)



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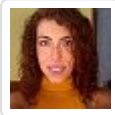
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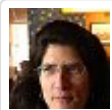
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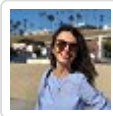
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