Reproducibility of Software Engineering Research – Summary Report

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Storage Strategies for Collections in Dynamically Typed Languages

- DOI: 10.1145/2509136.2509531
- Conference: OOPSLA
- Year: 2013
- Badges: Artifact Evaluated
- Observations
  - Artifact in VM form, besides a BitBucket repo
  - Detailed guideline
  - Easy to build and run
  - For standard/, needed to modify the benchmarks address in Makefile
  - Worked only on prebuilt/, not on standard/
- Results
  - For tables, the files are .tex suffixed => Not as intuitive as the tables in the paper
  - Could be reproduced

Stacked Borrows: An Aliasing Model for Rust

- DOI: 10.1145/3371109
- Conference: POPL
- Year: 2020
- Badges: Artifacts Available, Artifacts Evaluated & Reusable
- Observations
  - Artifact in VM form, besides a GitLab project
  - Relatively detailed documentation, no relevant instructions for simulaion part
  - Some code examples to run in GitLab project
  - Artifact has already provided the build results
- Results
  - Could be reproduced

Dynamically Diagnosing Type Errors in Unsafe Code

- DOI: 10.1145/2983990.2983998
- Conference: OOPSLA
- Year: 2016
- Badges: Artifact Evaluated
- Observations
  - Artifact in VM CLI form => Cannot copy&paste. The interface cannot be pulled up to view the content above
  - Detailed guideline in README
- Results
  - Could not be reproduced

Precise Static Modeling of Ethereum "Memory"

- DOI: 10.1145/3428258
- Conference: OOPSLA
- Year: 2020
- Badges: Artifacts Available V1.1 & Artifacts Evaluated Functional V1.1
- Observations
  - Artifact on Docker
  - Detailed instructions
  - Unfortunately, many commands were not executed successfully
- Results
  - Could not be reproduced

Summary

1. Focus more on reproduction methods (steps), rather than understanding reproduction contents
2. VM is a popular and effective way to store the artifact
3. Factors for the success of the reproduction include the level of detail of the guide, the quality of the artifact itself and the version compatibility of the tools
4. If the problem is in the artifact itself, it should not be promulgated badges

Thank you for your attention!