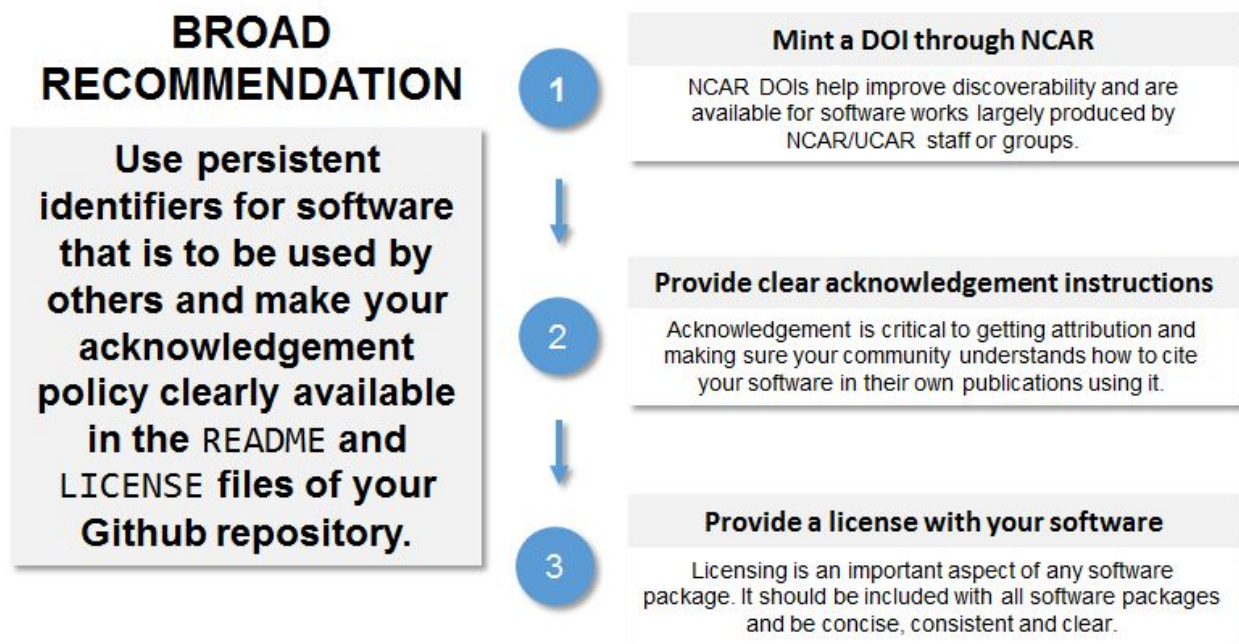# NCAR Software Citation Recommendation 2020

With over 500 repositories in the NCAR Github organization repository (https://github.com/NCAR), there is an obvious need to develop and understand the scientific software practices and norms within the organization. In the first quarter of 2020, the NCAR library developed a brief software citation survey to understand the needs of scientific software producers at NCAR. The survey focussed on questions about citation practices, persistent identifiers for software, licensing, tools and platforms supporting software archiving, among other things. The data-driven recommendations in this document we're informed directly by the survey responses.

Software creators may benefit in a number of ways from more consistent software archiving and citation practices. First, software citations are increasingly tracked and associated with corresponding research, resulting in an additional metric of the software's impact (complementing software download and contributor metrics). Second, formalizing a recommended citation for a software package clarifies the attribution of responsibility and recognition for the software's creation. Third, there is value in advertising a software use policy via formal means (e.g. established software licenses) or informal usage statements. In sum, the below recommendations are intended to advance the idea that software is a first class research asset.

BROAD RECOMMENDATION

Use persistent identifiers for software that is to be used by others and make your acknowledgement policy clearly available in the README and LICENSE files of your Github repository.

1 — **Mint a DOI through NCAR**
NCAR DOIs help improve discoverability and are available for software works largely produced by NCAR/UCAR staff or groups.

2 — **Provide clear acknowledgement instructions**
Acknowledgement is critical to getting attribution and making sure your community understands how to cite your software in their own publications using it.

3 — **Provide a license with your software**
Licensing is an important aspect of any software package. It should be included with all software packages and be concise, consistent and clear.

The NCAR library has staff and resources available for you to begin an initial consultation to understand how you might begin to implement these recommendations. If you already have a software repository that you would like reviewed for alignment with these recommendations, please contact us. For more information please visit: https://ncar.github.io/software-citation.

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