Developing guidelines for code sharing towards reproducibility

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Background

- Reproducibility is the key for sustainable development of Earth and space science (ESS) data applications.
- Particularly important to Machine learning applications in ESS .
- ESS community can leverage existing guidelines from computer vision & other fields, such as the NeurIPS reproducibility program.

Expected Outcome

- A *checklist* to ensure reproducible research code sharing;
- A *repository template* on reproducible code sharing;
- A list of *resources* to improve code reproducibility for ESS community;
- An instructional *blog/journal* article on the purpose and how to use these ESS-specific community resources to promote reproducible research.

Earth and space science community needs a community guidelines for sharing reproducible code.
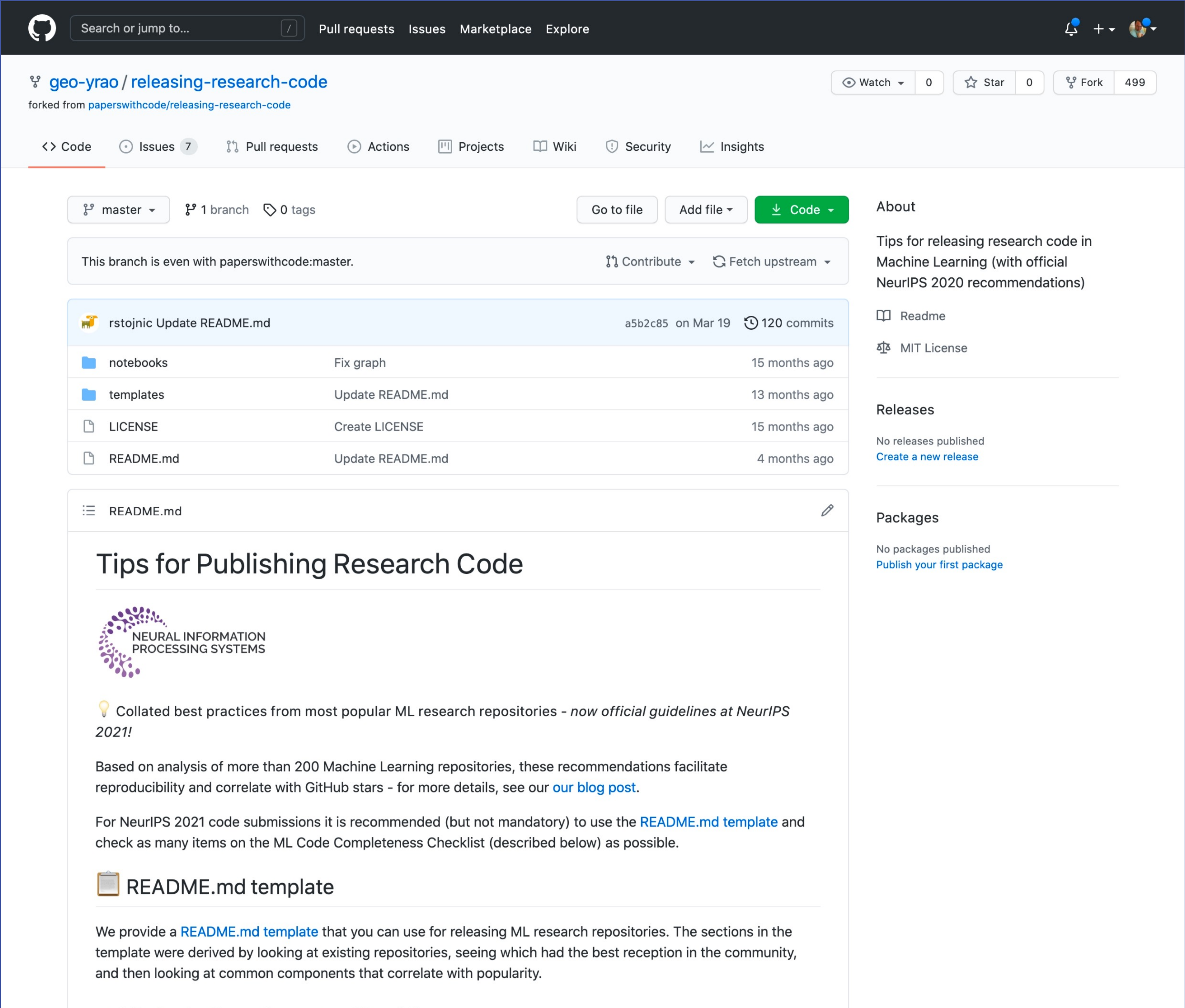
How to Contribute

- Submit issues/pull requests or comment on existing issues/pull requests in the GitHub repository;
- Contact us with your thoughts!

Motivation

- ***Why borrowing from NeurIPS***? Their resources (recommendations, templates, and checklist) serve as one of the major starting points that many turn to.
- *Papers with Code findings* indicates that the use of these community NeurIPS resources leads to more useful repositories and higher quality research.
- ***Why ESS specific guidelines***? ESS research has unique features that may not be fully addressed by the NeurIPS resources (e.g., data accessibility).
- Spark *community collaboration* through the shared GitHub repository, to create a list of ESS-centric resources, and help with advancing reproducibility across ESS community (potentially adopted by ESIP, AGU, and others).

Visit the GitHub Repository:

https://github.com/geo-yrao/releasing-research-code

* This repo was forked from NeurIPS guideline.