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Software Citation Tools

Project Context

Software is often used in scientific research, but no adopted standard exists for citing software in research. Because of this:

- Software is cited as data
- Papers about the software, instead of the software itself, are cited
- Software is not cited at all

The Mozilla Foundation wanted to create a suite of tools to help researchers cite their software more easily

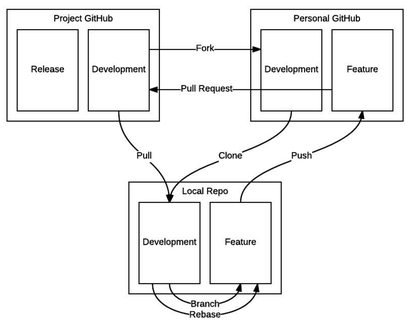
The Force 11 Working group outlined necessary components of a good citation. These include:

- Attribution
- Specificity
- Accessibility
- Persistance
- Unique Identification

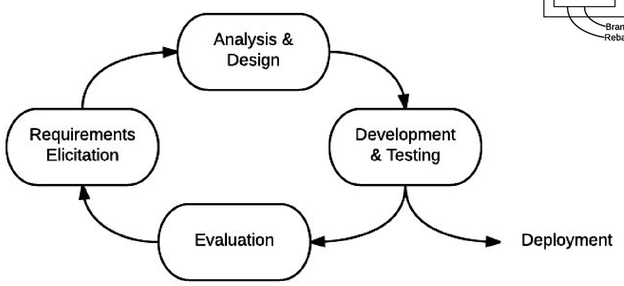
Process

The development and contributing process was designed to allow external contributors to easily develop code for the project.

Contributing Process



Development Methodology



Products

Core Library

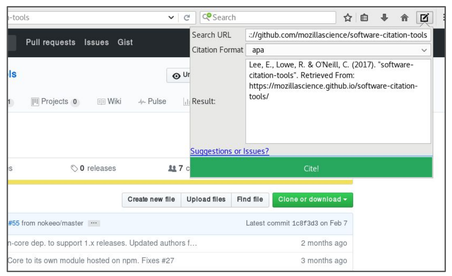
Designed and built to be extendable to easily fit the needs of the community, it takes in a url and a citation format and then returns a citation.

Webapp

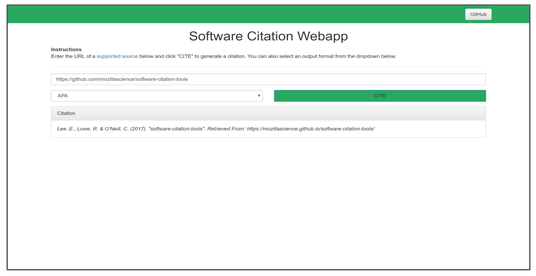
The Citation Webapp is built to allow users to easily cite software from Github or Figshare, with the additional functionality of being able to cite private or enterprise versions of github.

Plugin

Plugin is designed to provide the majority of the functionality of the webapp but gives the user the convenience of being able to cite a page they are on or just by pasting in a link.

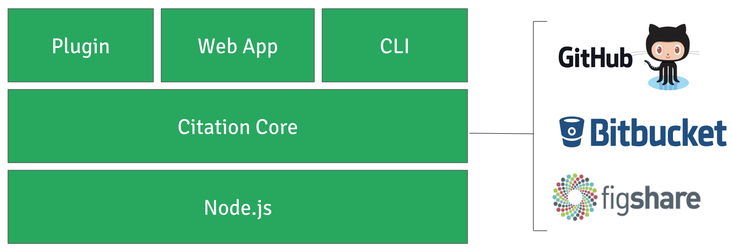


Citation Plugin



Citation Webapp

Architecture



All of the products are built on a shared library called Citation Core. Citation Core is written in JavaScript with Node.js and handles fetching data and formatting said data into a selected citation format.

Community Engagement

Community engagement is critical to the success of the various apps delivered.

Engagement gives us:

- Requirements for new features and apps
- Feedback on new features as as developed
- Potential contributors

Reaching out to the community at MozFest 2016 in London, England

To achieve these goals, we created public discussions on our project page, conducted direct interviews with prominent community members, attended a conference where we discussed the products with potential end users, and sent out periodic newsletter to spread awareness of new features and solicit feedback.

Lessons Learned

Things that went well

- The design of the core library made it simple to use in other applications and add functionality to it.

Things that could be improved

- Building a community is difficult
- Making accurate estimations is difficult