

INTRODUCTION

Research labs need a professional and up-to-date website to showcase their work, attract collaborators, and establish an online presence, but developing and maintaining one can be challenging and time consuming. **Lab Website Template** is an open-source, code-based tool that **automates citation generation, repo configuration, and anything else it can**, letting labs focus more on research and less on web development and grunt work.

APPROACH

Before v1.0, we gathered many observations and direct feedback that shaped our approach.

Some things we noticed:

- The most **common pain points were about the same things same things**, like repo setup and configuring **key options**.
- Labs can't waste time** on basics or low-level details, but still need ways to customize things when needed.
- Labs want to see a tool is **actively maintained**, greatly sold by good support.

Some philosophies we adopted to address these needs:

- Doing > instructing.** Aggressively experimenting with GitHub Actions and scripting, we found we could automate much more setup/config/etc. than we thought.
- Don't let issues languish.** We respond quickly and discuss suggestions to make people feel heard, even if actual resolution takes longer.
- Keep it simple and focused.** We earnestly consider all feedback, but also don't accept every suggestion at face value to avoid feature/config bloat (*inner-platform effect*).
- Docs are essential.** Code/comments are not enough. We invested in writing a full GitBook site with examples, FAQs, guides, diagrams, search, etc., which lets labs help themselves for common things and saves us time for more novel work.
- Cleanly structure content.** We try to separate *template* content from *user* content so labs can focus on just what's important to them, but still look "under the hood" when they need to customize.

TECHNOLOGIES

- Jekyll** Static site generator. Long-lived. Plugin-rich.
- GitHub** Pages for hosting. Actions for automation.
- Markdown** Content. *Liquid* for templating.
- Python** Auto-cite scripts. Familiar for researchers.
- Docker** Runs template locally. Cross-platform. Single install.
- Ruby** Data filtering. Other misc.



TEMPLATE



POSTER

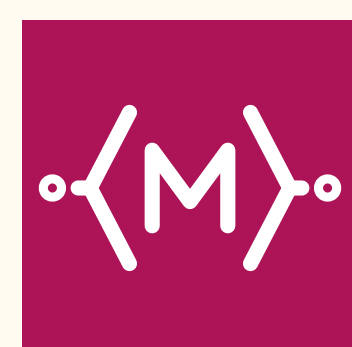
AUTO-CITATIONS

Who wants to **manually manage** citations?

```
orcid.yaml
- orcid: 0000-1111-2222-3333
```



```
sources.yaml
- id: doi:12345
  image: thumbnail.jpg
  tags: biology, data
```



```
research.md
{%
  include list.html
  data="citations"
  filter="category == 'featured'"
%}
```

Simple input → **Auto-magic** → **Rich** output

Input your "**meta-sources**" as **simple IDs**.

We **auto-expand** these into **full lists** of sources from ORCID, Google Scholar, or PubMed (extendable with plugins).

Input your "**manual**", hand-picked **sources** as **simple IDs** (2k+ supported types), along with extra rich details.

We use **Manubot** to **auto-generate full citations** – title, authors, date, publisher, etc. – for all sources.

Include citations in your site however you want with the **list component**. Filter with **unwieldy Liquid** or **any Ruby expression**.

MORE AUTOMATION

Several other **automations** handle the most **confusing** and **error-prone** tasks for you, triggered by **events**, with little or **no manual steps**.

- Click some buttons**, wait a few, and your site's **live and ready** to edit.

- Edit your content**, wait a few, and your **changes are live**.

- Suggest changes and preview them before publishing.** No service like Netlify needed.

- Keep your lab's CV up-to-date.**

First time setup

- Init branches
- Clean up/rename files
- Personalize with `@username /URL/etc.`

On push to main

- Run cite process
- Build site
- Host at main URL

On pull request

- Build site preview
- Host at `/pr-#` sub-URL
- Post PR comment w/ link

On schedule (weekly by default)

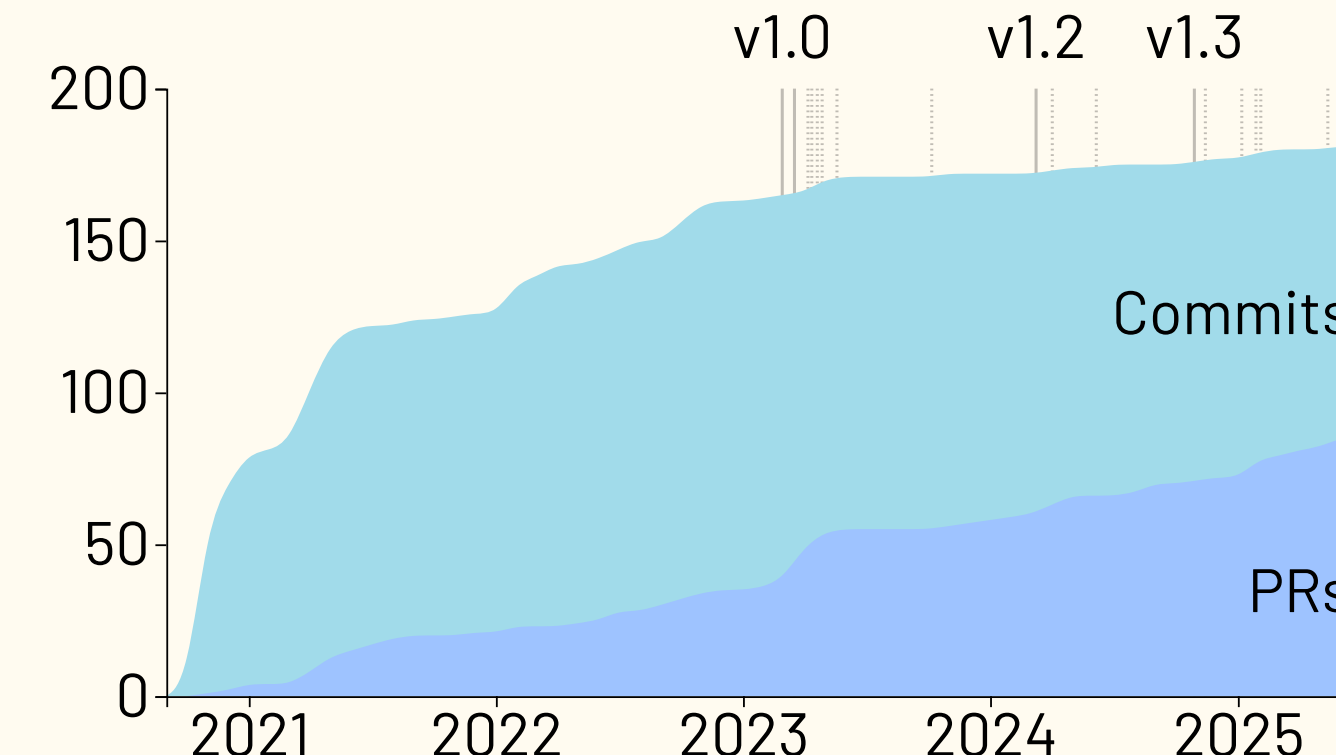
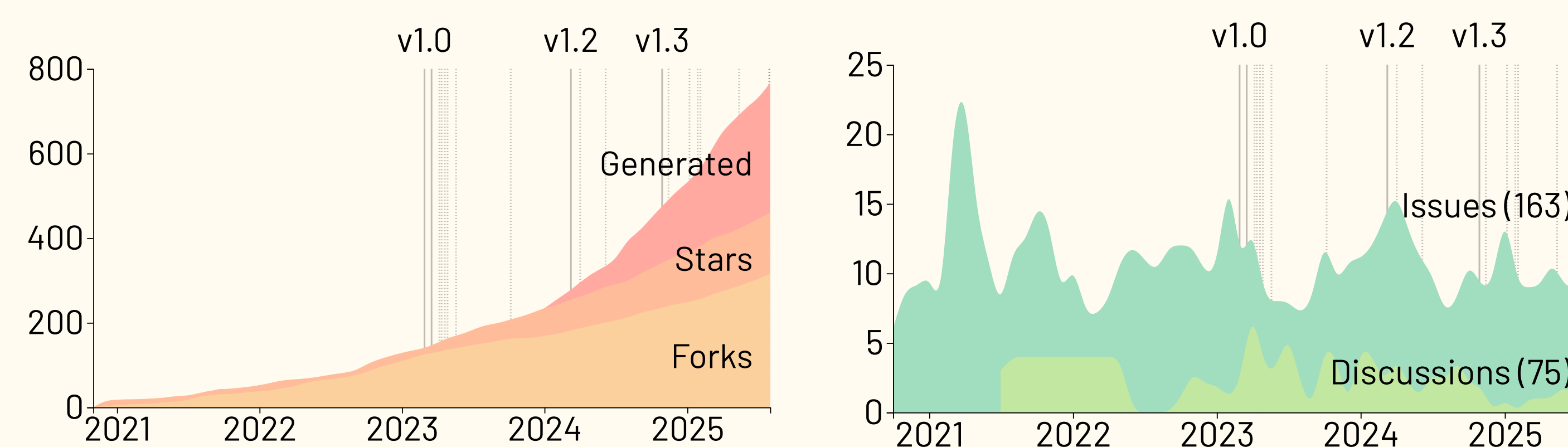
- Run cite process
- ORCID/etc. may have updates
- Open PR if any changes

OTHER FEATURES

- Suite of pre-made components like figures, citations, and search.
- Team member pages with bios, roles, and social links.
- Blog posts with tags and rich content.
- Desktop and mobile. Dark mode.

OUTCOME

We believe **our approach and design lead to an effective piece of software**, evidenced by the template's growing adoption on GitHub, direct positive feedback, and gallery of active labs using it. This work has likely saved time and money for research labs and **other groups**, reflecting a community resource that serves the needs of its users.



	Median...	Response	Resolution
Issue		3.5 hrs	12 days
Discussion		2 hrs	10 hrs

The **next evolution** could focus on even more convenience, simplicity, robustness, and flexibility. We'd like to use a **more modern site generator** with type-safety, make template version upgrades automatic, and make citations even more seamless.

