Lab Website Template

AN EASY, AUTOMATIC, FLEXIBLE WEBSITE TEMPLATE FOR LABS

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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.

AUTO-CITATIONS

Who wants to **manually manage** citations?

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

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

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).

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

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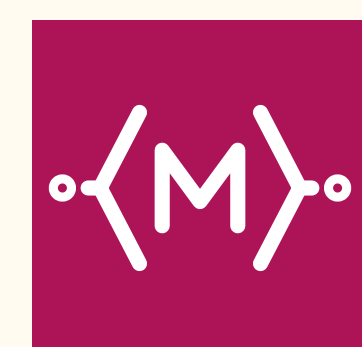
```
research.md
{%
  include list.html
  data="citations"
  filter="category == 'featured'"
%}
```

Include citations in your site however you want with the **list component**. Filter with ~~unwieldy Liquid~~ 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.

First time setup

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

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

On push to `main`

Run cite process
Build site
Host at main URL

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

On pull request

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

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

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.
- Blog posts with tags and rich content.
- Team member pages with bios, roles, and social links.
- 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.
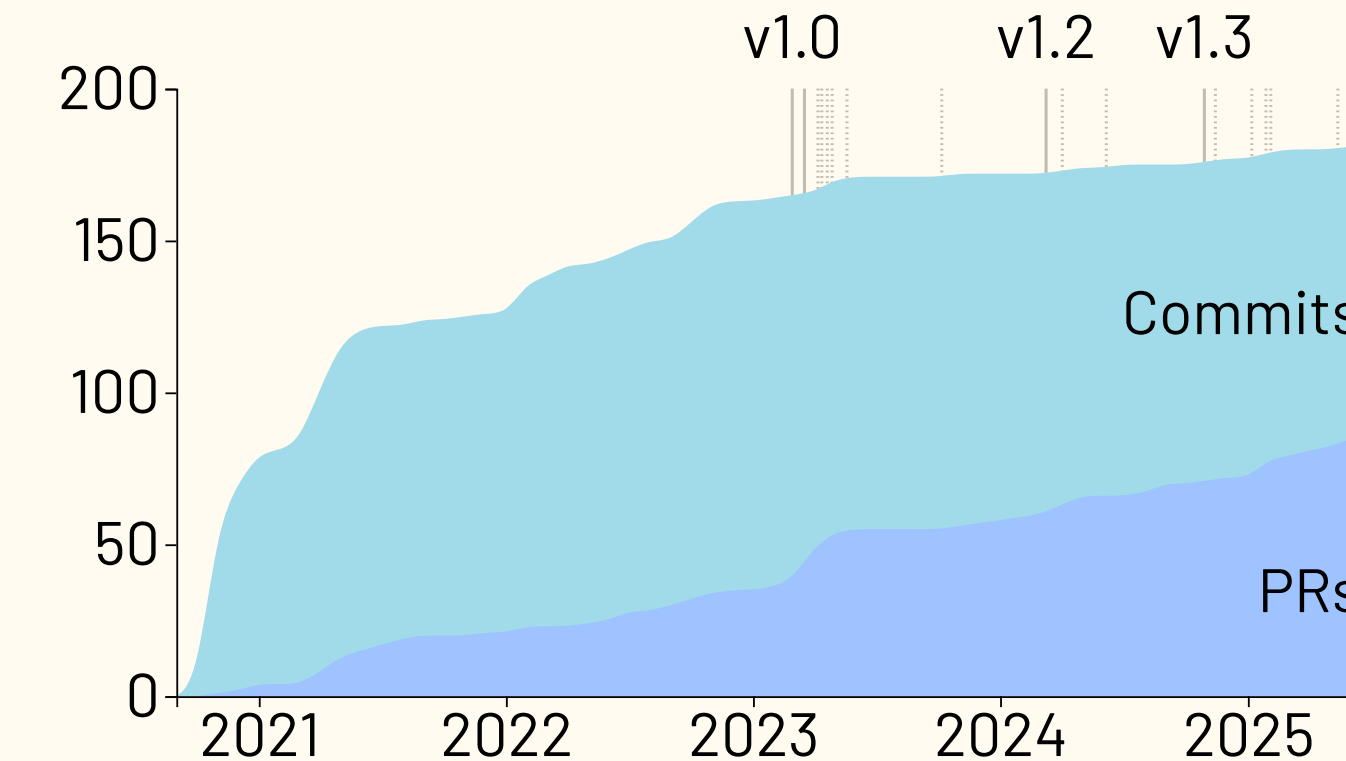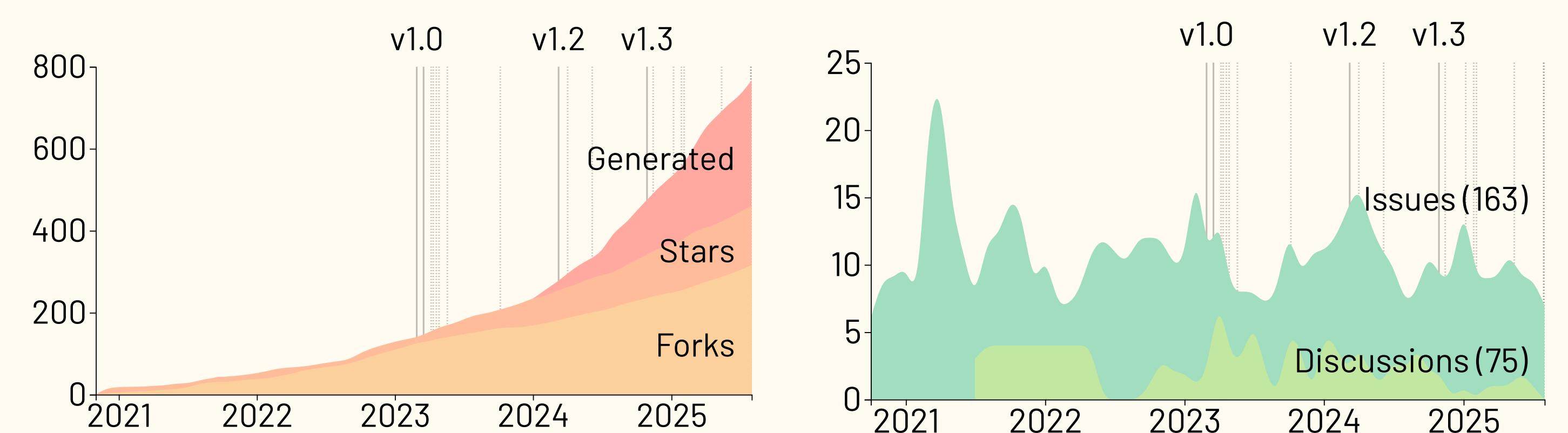
Median...	Response	Resolution
Issue	3.5 hrs	12 days
Discussion	2 hrs	10 hrs

The next evolution could focus on even more convenience, simplicity, robustness, and flexibility, like using a **modern site generator** with type-safety, making template version upgrades automatic, and making citations even more seamless.

TEMPLATE   POSTER