Lab Website Template

AN EASY, AUTOMATIC, FLEXIBLE WEBSITE TEMPLATE FOR LABS

Vincent Rubinetti, Casey Greene
University of Colorado, Anschutz School of Medicine

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.
- Labs want to see that a tool is **actively maintained**, strongly 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).
- **Code/comments aren't enough**. We have a full GitBook docs site with examples, FAQs, guides, diagrams, search, etc. Labs can help themselves for common things, which saves us time for more novel work.
- **Cleanly structure content**. We separate template content from user content so labs can focus on just what's important to them, but still look "under the hood" when needed.

TECHNOLOGIES

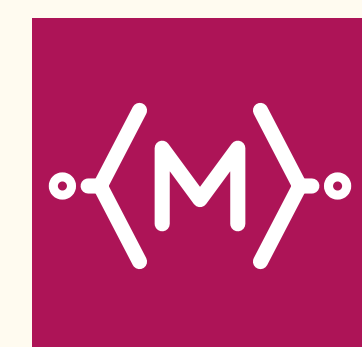|		
Jekyll	Static site generator. Long-lived. Plugin-rich.
GitHub	**Pages** for hosting. **Actions** for automation.
Markdown	For content. Liquid for templating.
Python	For auto-cite scripts. Familiar for researchers.
Docker	Runs template locally. Cross-platform. Single install.
Ruby	For data filtering. Jekyll plugins, other misc.

TEMPLATE   POSTER

AUTO-CITATIONS

Who wants to **manually manage** citations?

Simple input → ⚙ ✎ → **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 (extensible via plugins).

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

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

We **auto-generate** full citations – title, authors, date, publisher, etc. – with **Manubot**.

```
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**.

on push	update-citations 2m 43s	build-site 2m 40s	deploy https://greenelab.com/ 30s

- **Click some buttons**, wait a few, and your site is **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 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**.

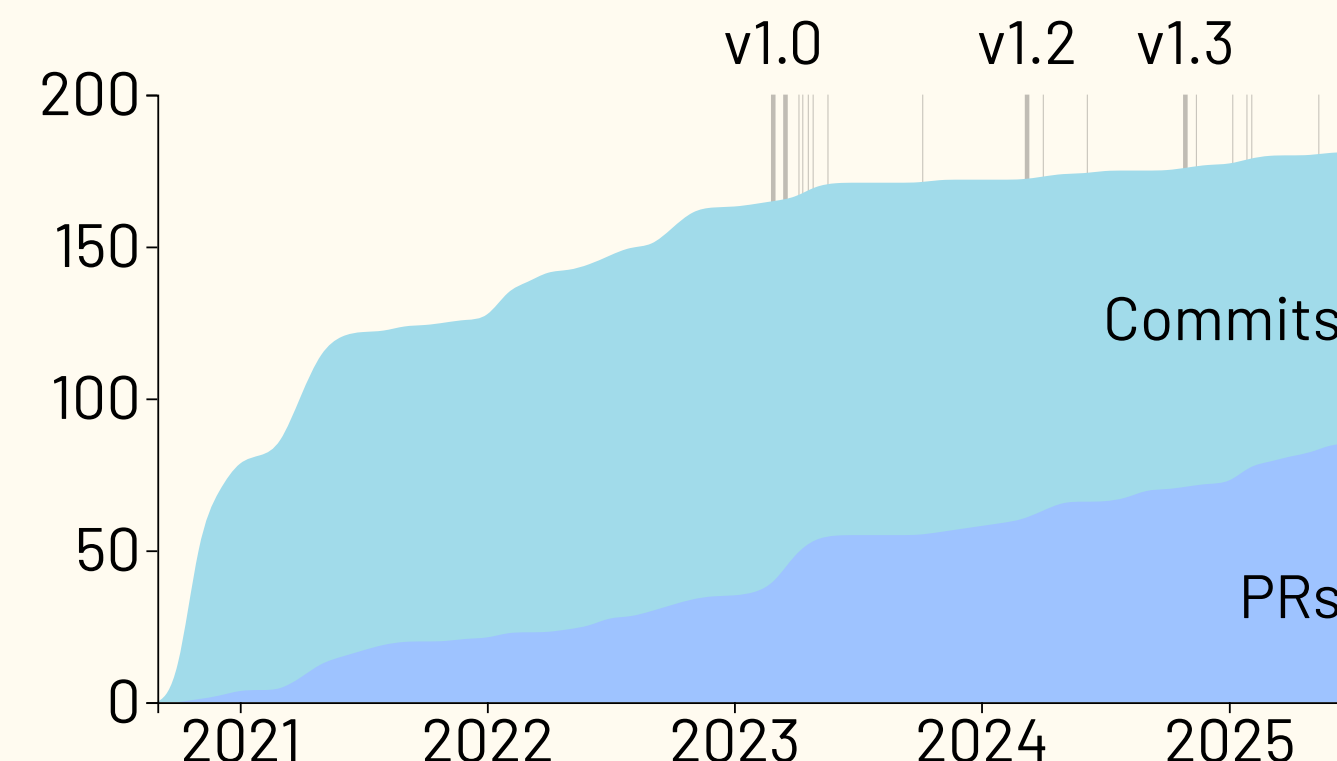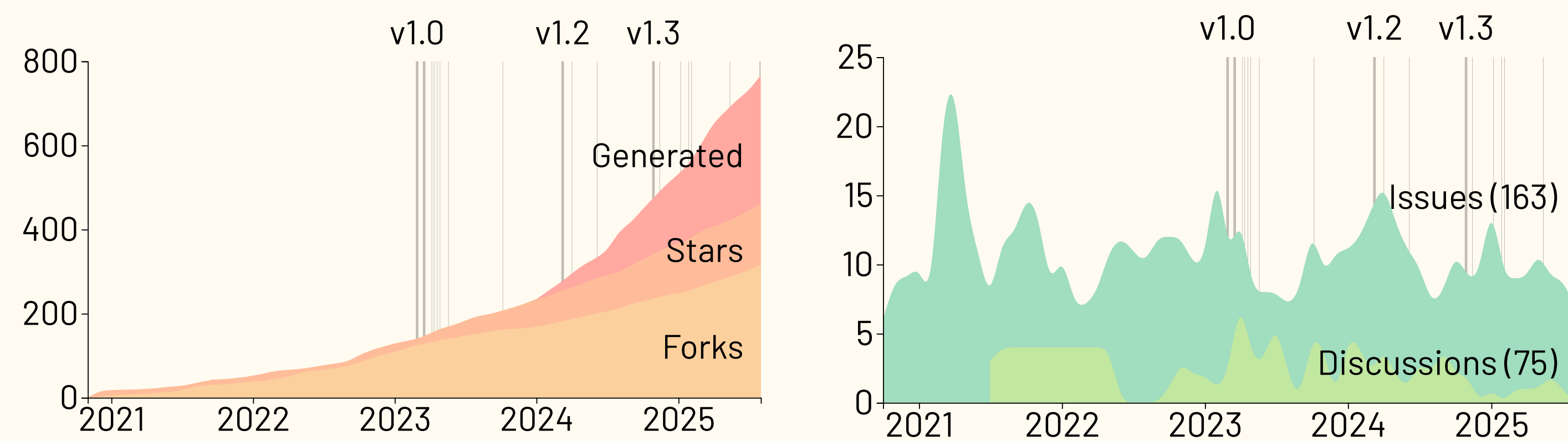**On schedule** (weekly by default)
- Run cite process
- ORCID/etc. may have updates
- Open PR if any changes

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 a valuable piece of software**, evidenced by the template's growing adoption on GitHub, positive feedback, and gallery of active labs using it. This work has likely saved researchers and others significant time and money, reflecting a community resource that effectively 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.