Colophon

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This site is built from text files and templates. The generator, build environment, and publishing workflow are all kept in the source repository.

Hakyll

Hakyll is the Haskell library that ties the site together. The build rules describe how pages, posts, stylesheets, and other assets become files in the finished site.

Pandoc converts Org, Markdown, and reStructuredText into HTML. Hakyll then applies the shared page templates, builds the post archive and RSS feed, and makes links relative to each page. The local preview watches the source files and rebuilds pages as they change.

The colophon and posts also have PDF editions. Pandoc converts the same source files to Typst, and Typst typesets the PDFs during the Hakyll build. A separate template controls the print layout, and each HTML page links to its PDF edition.

Diagrams

Hakyll uses the Haskell `diagrams` library to draw the homepage dragon curve (`diagram.svg`), the broken infinity curve on the 404 page (`images/404.svg`), and the `jmc.` favicon.

Pikchr and Graphviz source blocks in Org are rendered at build time and embedded as inline SVG in the HTML. They share the page's fonts and stylesheets. PDF editions embed the same diagrams as vector images.

Nix

The Nix flake defines both the site generator and the generated website as separate build outputs. Nix first compiles the Haskell program, then runs it to produce the static site. Unchanged build outputs can be reused from the Nix cache.

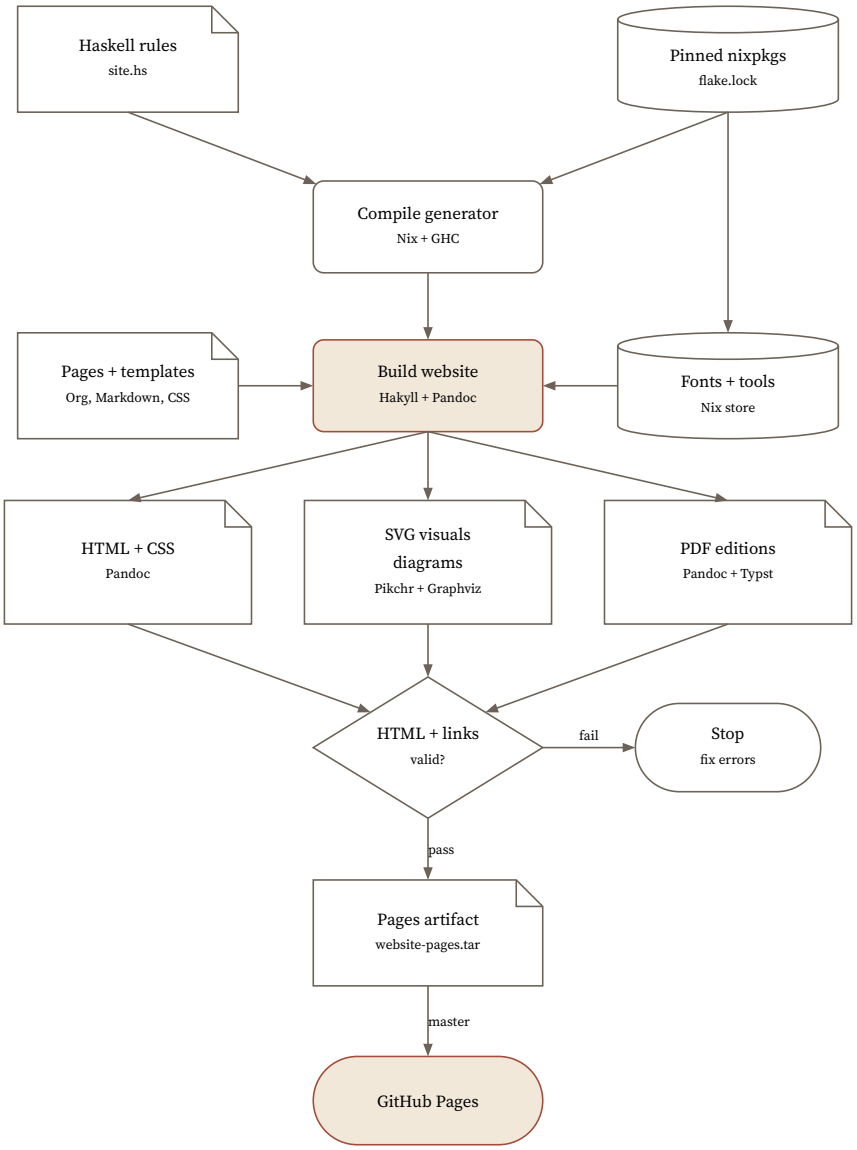
The lock file pins the nixpkgs revision that supplies the compiler, Haskell libraries, and fonts. Fonts are fetched into the Nix store and passed to Hakyll, which copies them into the finished site. They do not need to be kept in the source tree.

The same flake provides `nix build` for the website, `nix run .#watch` for the live preview, and `nix develop` for a Haskell development environment.

Checks and publishing

On pushes and pull requests, GitHub Actions runs `nix flake check`. This builds the site, validates its HTML with the Nu HTML Checker, and checks internal links with Lychee.

After the checks pass, Nix packages the generated files into a GitHub Pages artifact. Successful builds on `master` are deployed to GitHub Pages.



Typography

Text and headings are set in Source Serif 4. Code uses Fira Code. Both fonts are served locally as WOFF2 files.

The PDF editions embed the same font families, supplied by Nix. Equations use STIX Two Math.