

Stork Search

“Impossibly fast web search, made for static sites.”

<https://stork-search.net>

James Little • Spring 2021

<https://jameslittle.me/talks/stork>

Stork Search

“Impossibly fast web search, made for static sites.”

<https://stork-search.net>

James Little • Spring 2021

<https://jameslittle.me/talks/stork>

Who am I?

- Client-side engineer (iOS + Web), Stripe Terminal, in San Francisco
 - <https://jameslittle.me>
 - twitter.com/jameslittle230
-
- Recovering college newspaper designer & web developer
 - Pretty obsessed with the web as a document & application platform



"serious coder" photo
"why is he outside?"



GET /search?is+my+hamster+lonely

Search the Site...



Truths about a College Newspaper Website

- Content updates about once per week
- There's a finite amount of content, all with similar keywords
- No institutional knowledge

Stuff that happened at roughly the same time

- WebAssembly became easy to work with
- Netlify → "free tier for CDNs"
- Full-text search isn't black magic



**I can generate a search index out of band,
then load it onto a webpage like an image,
then use WebAssembly to run the search.**

Fun Facts about Images

Static, pre-generated
search indexes
for small sites that
don't update often



- Random bag of bytes that the webpage requests
- Once the request completes, the browser knows how to do something ✨special✨ with those bytes
- Best served from a CDN, since they don't update often
- Lots of preprocessing applied to make it as performant as possible
- Seriously improves the experience of using the site

The background is a vibrant green with a white grid pattern. Several palm trees are scattered across the scene, some with clusters of coconuts. The text is centered and written in a bold, dark blue, sans-serif font.

MANU
MONTHS LATER

https://stork-search.net

SEARCH THE [FEDERALIST PAPERS](#)*:

*Well, just the first twenty.

Stork is two things that work in tandem to put a beautiful, fast, and accurate search interface on your static site. First, it's a program that indexes your content and writes that index to disk. Second, it's a Javascript library that downloads that index, hooks into a search input, and displays optimal search results immediately to your user, as they type.

Stork is built with Rust, and the Javascript library uses WebAssembly behind the scenes. It's built with content creators in mind, in that it requires little-to-no code to get started and can be extended deeply. It's perfect for JAMstack sites and personal blogs, but can be used wherever you need a search interface.

LATEST VERSION:

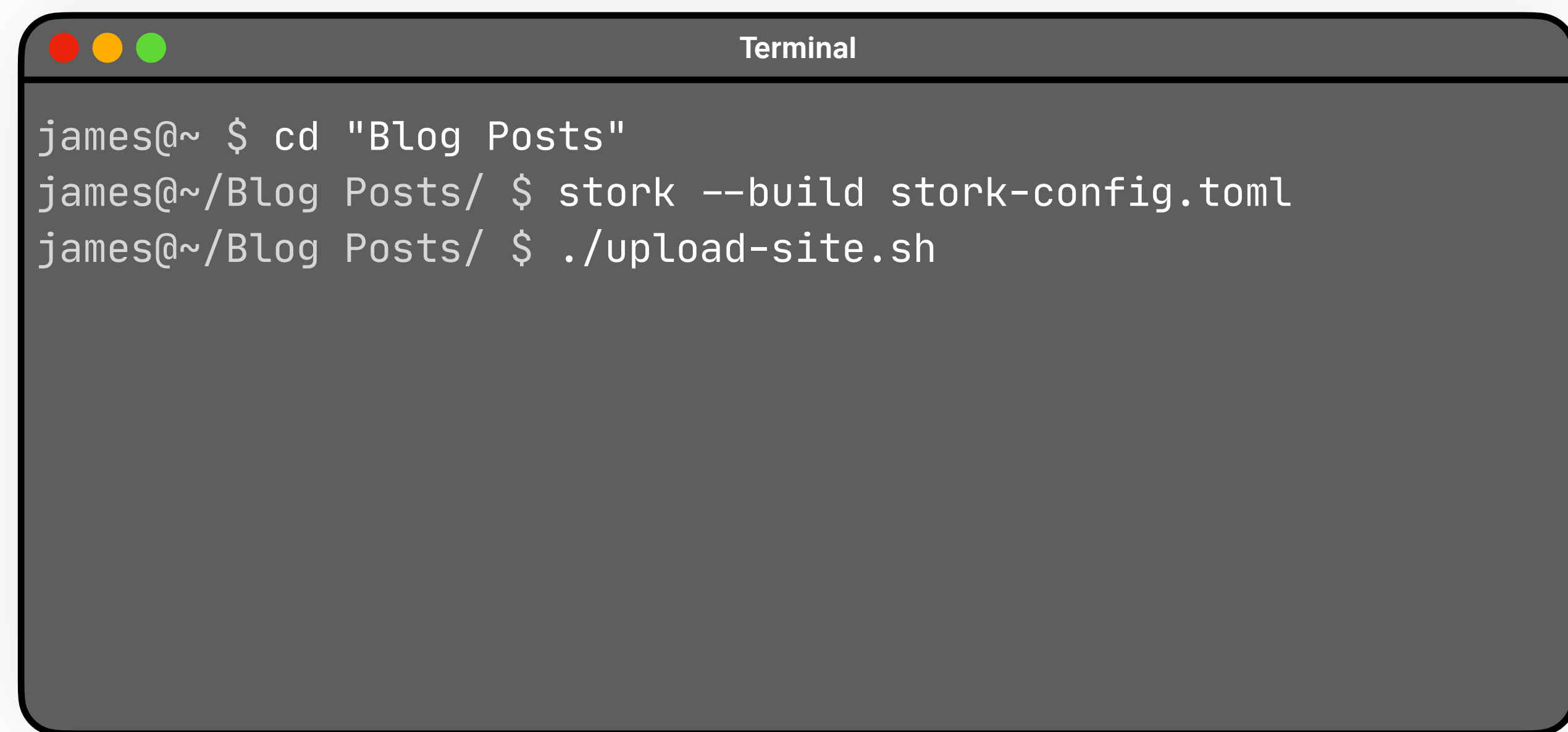
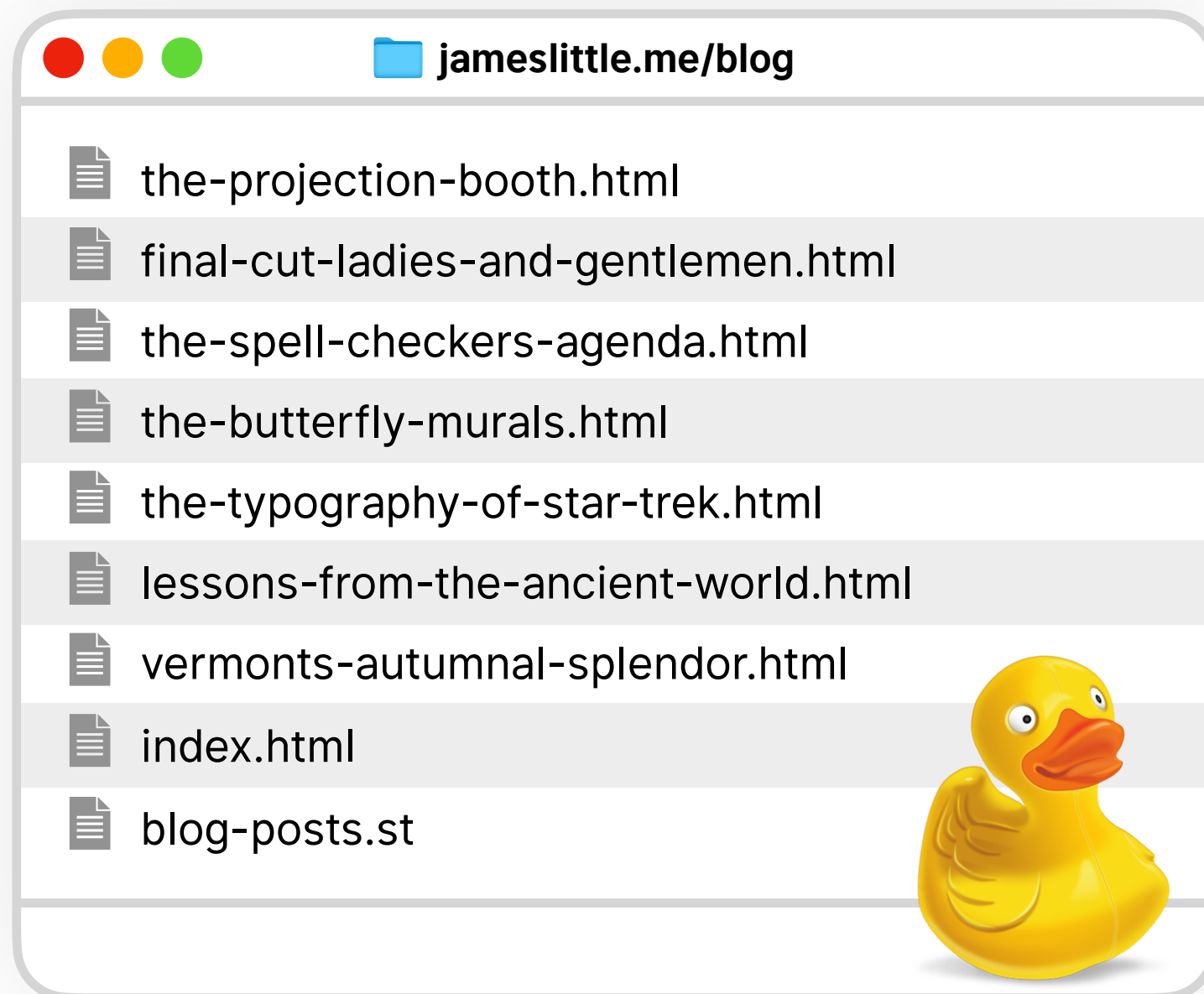
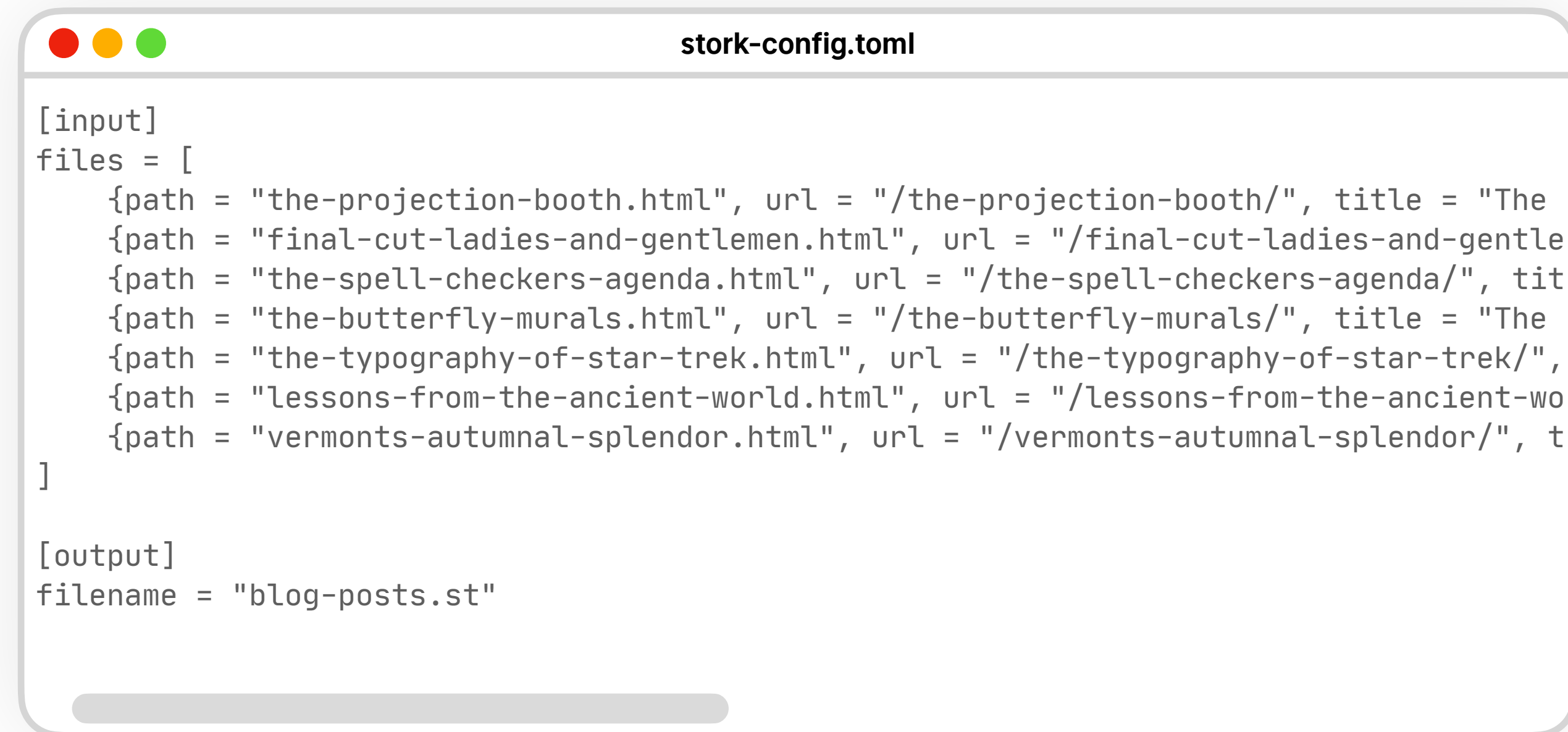
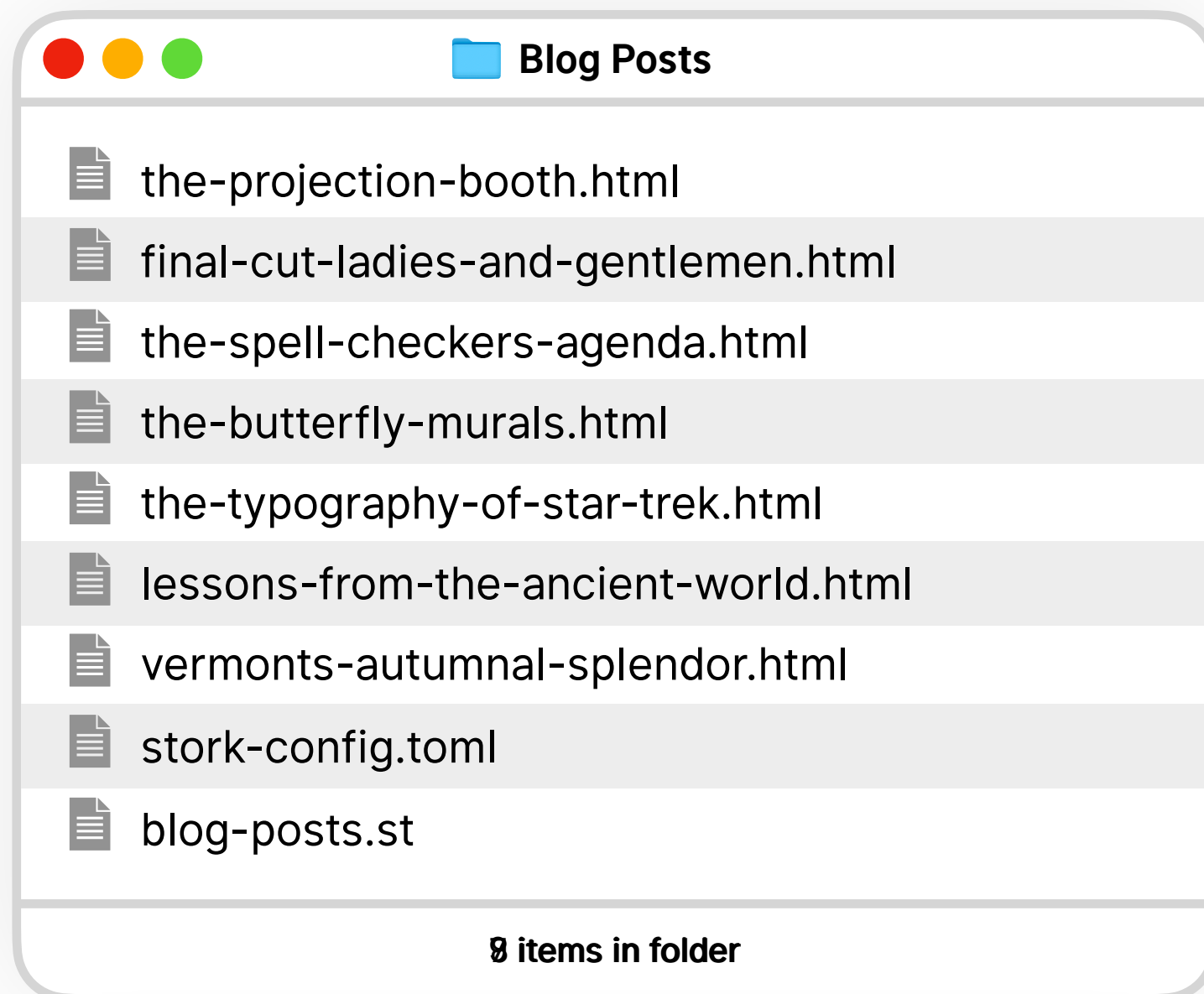
v1.0.0

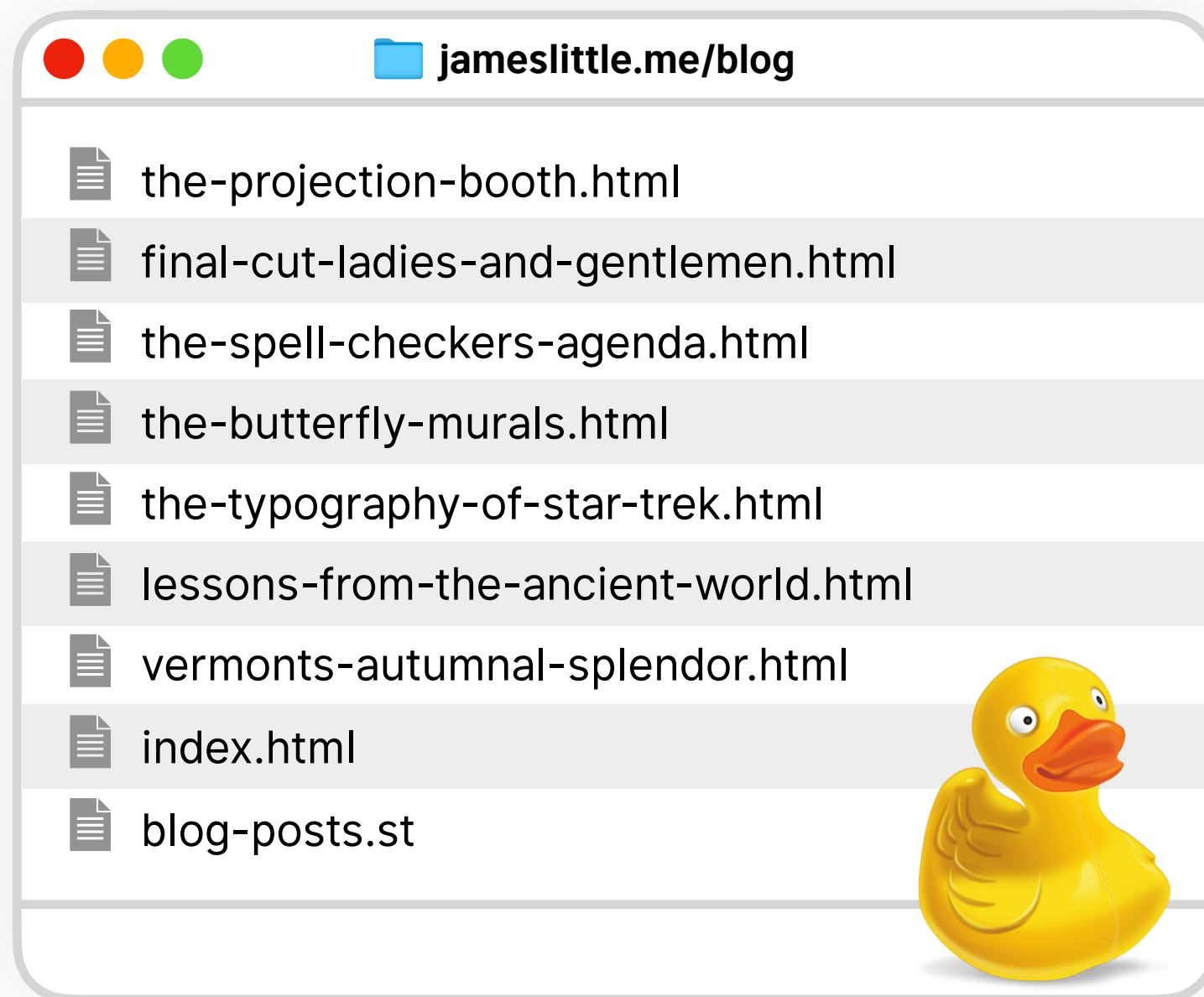
Released on Dec 13, 2020

[View on Github →](#)

Let's search for some stuff!

Using Stork





```
index.html

<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="utf-8" />
    <title>My Blog</title>
    <link rel="stylesheet" href="https://files.stork-search.net/basic.css" />
  </head>

  <body>
    <div class="stork-wrapper">
      <input data-stork="blog-search" class="stork-input" />
      <div data-stork="blog-search-output" class="stork-output"></div>
    </div>

    <script src="https://files.stork-search.net/stork.js"></script>
    <script>
      stork.register(
        'blog-search',
        './blog-posts.st'
      )
    </script>
  </body>
</html>
```


Demo

<https://codepen.io/pen/MWbxagZ>

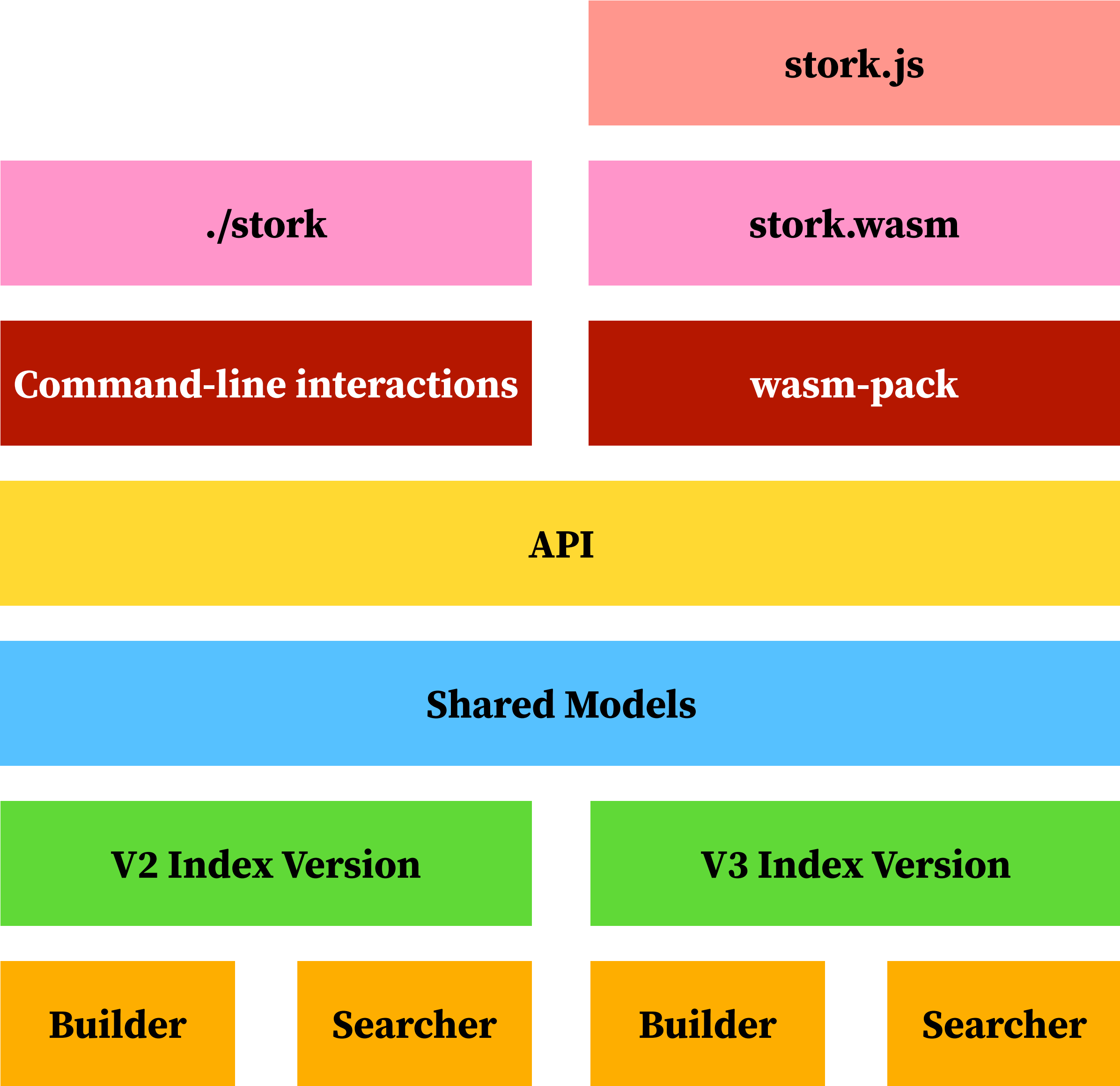
Behind the Scenes

How it works

Languages



● Rust 68.5% ● TypeScript 20.3%



Index Data Structure V3

Index

Entries (list)

Contents

Metadata

Title

URL

Fields

Queries (map)

Query

Results (list)

The documents you've indexed

Entry Index

Contents Indices (list)

Score

Aliases (list)

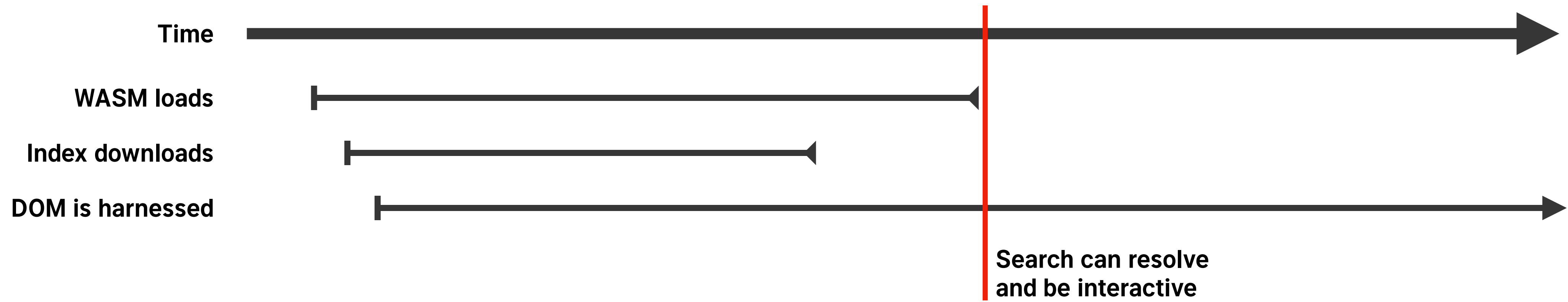
Stems & Prefixes

Alias Target

Score

An alias resolves to a query,
which will have its own list
of results & aliases





Where do we go from here?

Next Steps

Stork in the next year+

- "Obvious choice" for search if you're building a static-ish site
- Strong contender in other situations, too
- Skate to where the puck is going
- Stork as a "lifetime project"
- stork-search.net/roadmap

<https://jameslittle.me>

<https://twitter.com/jameslittle230>

jameslittle230@gmail.com

<https://stork-search.net>

<https://github.com/jameslittle230/stork>