



A father and daughter's pair-programming journey...

Let's Nostr!

@sopipip @fibonacci

Slides & Links at:

www.SoFibonacci.com



★ Intro ★

Get to know us!



Father-Daughter Team:

- **Soph:** HS senior with college coming soon
- **Leo:** Delivery manager of SW teams



Who we are...

Interest In:

- Freedom Tech
- FOSS
- Meeting cool people

Mission

- Prepare Soph for university studies in CS
- Get some quality Father-Daughter time 
- Learn useful programming practices & tools
- *BUILD* the *NOSTR*

The magic of building microapps in nostr

- FAST
- Free network effects
- NO. MORE. APIS
- In-protocol payments

- Easy
- Fast-feedback
- No rules
- Fast
- Easy

Why Nostr?



Our Timeline

Soph's coding classes
in elementary school

Soph's simple webdev
in middle school

★ Leo joined Nostr (via
damus testflight)

Leo and Soph started Nostr
and Svelte development ★

To be continued...

Apps on the iPad

Soph started taking AP
CSP in junior year

Soph enrolled in a
Cybersecurity class

Soph started taking AP
CSA in senior year



Our Process

- Use short iterations (1 week)
 - Make a plan on *Sunday*
 - Work solo or pairing *Monday to Saturday*
 - *Sunday* demo / inspect
- Mom was our scrummaster 😂💧



Demo

Our Projects



sophwrk.io



Simple site for contact, portfolio, zapping.

Use Case for Nostr:

Display page owner's latest posts

Simplicity: ★★★★★

Pair-Programming

Working and learning in tandem

Sometimes using the roles of 'driver' and 'navigator'

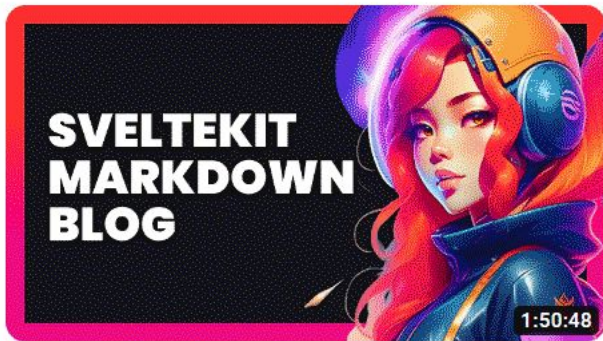


Benefits:

- Can work quickly
- Share knowledge
- Great onboarding tool
- Efficient way to overcome hard coding problems
- Two brains instead of one



Resources



Build And Deploy A SvelteKit Markdown Blog

21K views • 6 months ago



Joy of Code

Learn how to build and extend a blazingly fast SvelteKit Markdown blog for poets. 🙌 Support 📺 YouTube Membership ...

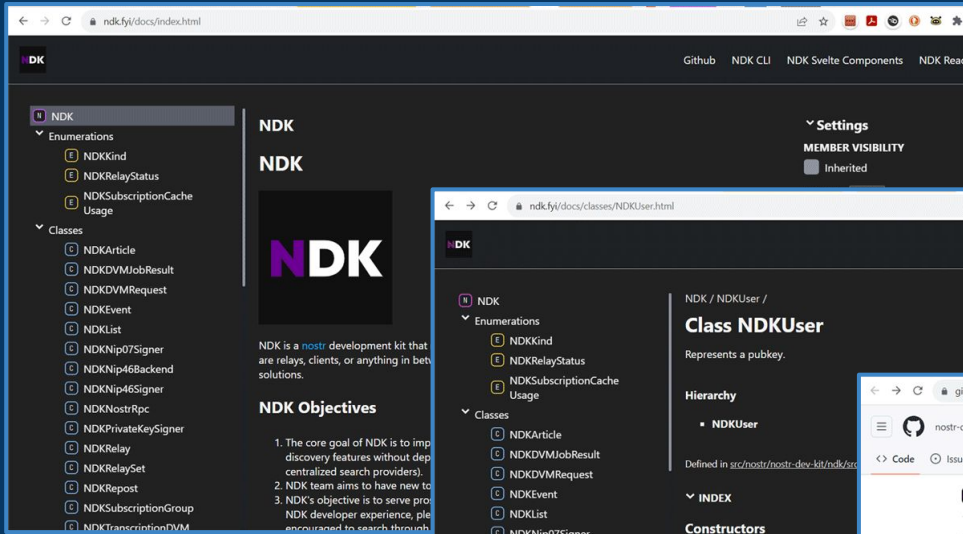


Intro | Project Setup | Layout And Styles | Setting Up Mdsvex | Posts API Endpoint | Showing Posts |... 16 chapters ▾





Resources



NDK

Enumerations

- NDKKind
- NDKRelayStatus
- NDKSubscriptionCacheUsage

Classes

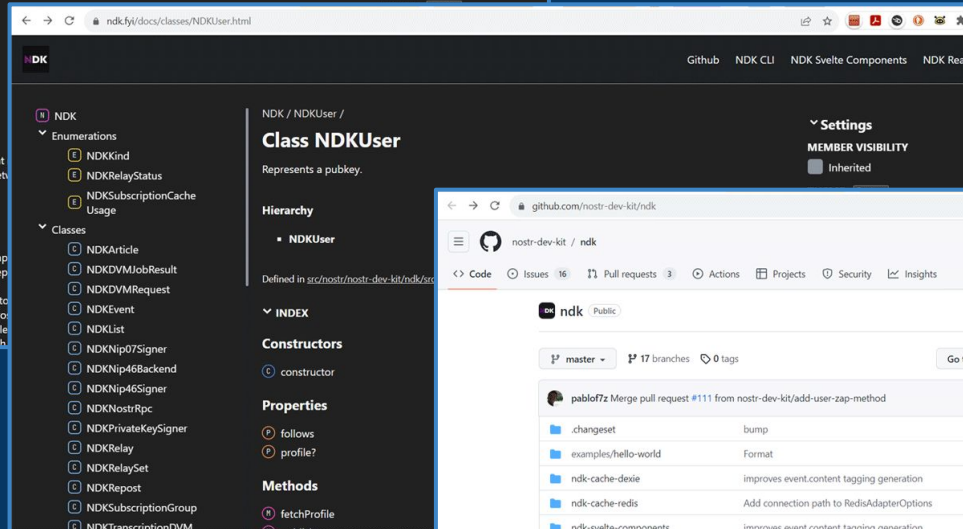
- NDKArticle
- NDKDVJobResult
- NDKDVRequest
- NDKEvent
- NDKList
- NDKNip07Signer
- NDKNip46Backend
- NDKNip46Signer
- NDKNNostrRpc
- NDKPrivateKeySigner
- NDKRelay
- NDKRelaySet
- NDKRepost
- NDKSubscriptionGroup
- NDKTranscriptionDVM

NDK

NDK is a **nostr** development kit that are relays, clients, or anything in between solutions.

NDK Objectives

1. The core goal of NDK is to improve discovery features without depending on centralized search providers.
2. NDK team aims to have new to...
3. NDK's objective is to serve professional NDK developer experience, please encouraged to search through...



NDK

Enumerations

- NDKKind
- NDKRelayStatus
- NDKSubscriptionCacheUsage

Classes

- NDKArticle
- NDKDVJobResult
- NDKDVRequest
- NDKEvent
- NDKList
- NDKNip07Signer
- NDKNip46Backend
- NDKNip46Signer
- NDKNNostrRpc
- NDKPrivateKeySigner
- NDKRelay
- NDKRelaySet
- NDKRepost
- NDKSubscriptionGroup
- NDKTranscriptionDVM

NDK / NDKUser /

Class NDKUser

Represents a pubkey.

Hierarchy

- NDKUser

Defined in `src/nostr/nostr-dev-kit/ndk-user.ts`

INDEX

Constructors

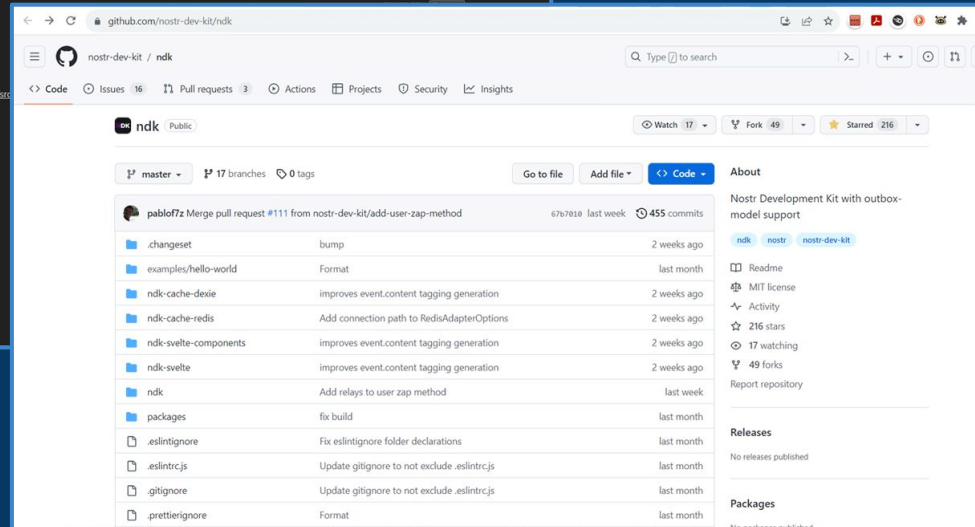
- constructor

Properties

- follows
- profile?

Methods

- fetchProfile



nostr-dev-kit / ndk

Code Issues 16 Pull requests 3 Actions Projects Security Insights

ndk Public

Watch 17 Fork 49 Starred 216

master 17 branches 0 tags

Go to file Add file Code

About

Nostr Development Kit with outbox-model support

ndk nostr nostr-dev-kit

Readme MIT license Activity 216 stars 17 watching 49 forks Report repository

Releases

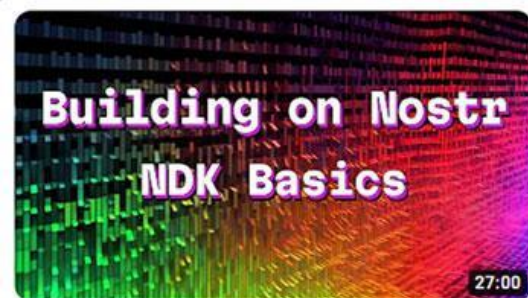
No releases published

Package

No packages published

File	Commit	Time
changelog	bump	2 weeks ago
examples/hello-world	Format	last month
ndk-cache-dexie	improves event.content tagging generation	2 weeks ago
ndk-cache-redis	Add connection path to RedisAdapterOptions	2 weeks ago
ndk-svelte-components	improves event.content tagging generation	2 weeks ago
ndk-svelte	improves event.content tagging generation	2 weeks ago
ndk	Add relays to user zap method	last week
packages	fix build	last month
eslintignore	Fix eslintignore folder declarations	last month
eslinttrc.js	Update gitignore to not exclude .eslinttrc.js	last month
gitignore	Update gitignore to not exclude .eslinttrc.js	last month
prettiignore	Format	last month





Building on Nostr: NDK Basics

1.6K views • 4 months ago



JeffG

Building apps on the Nostr protocol is surprisingly easy and enjoyable



Building on Nostr: NDK on the Command Line

283 views • 4 months ago



JeffG

A quick video showing how to use the NDK CLI tool to pull Nostr events



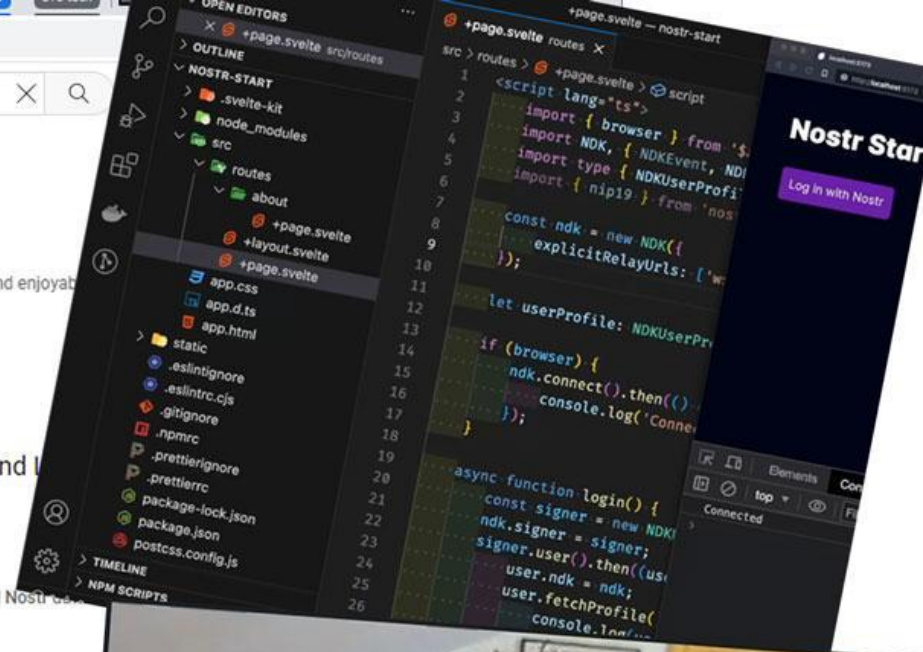
Building on Nostr: Fetching Events

366 views • 4 months ago

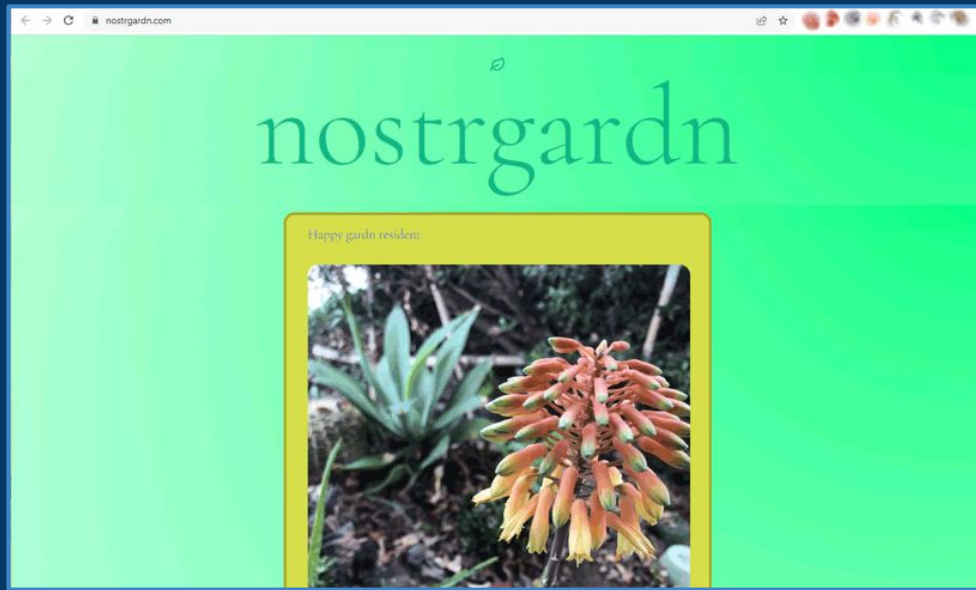


JeffG

A breakdown of the two different ways to fetch Nostr events using NDK



nostrgardn.com



Simple site for displaying pictures of nature, gardens.

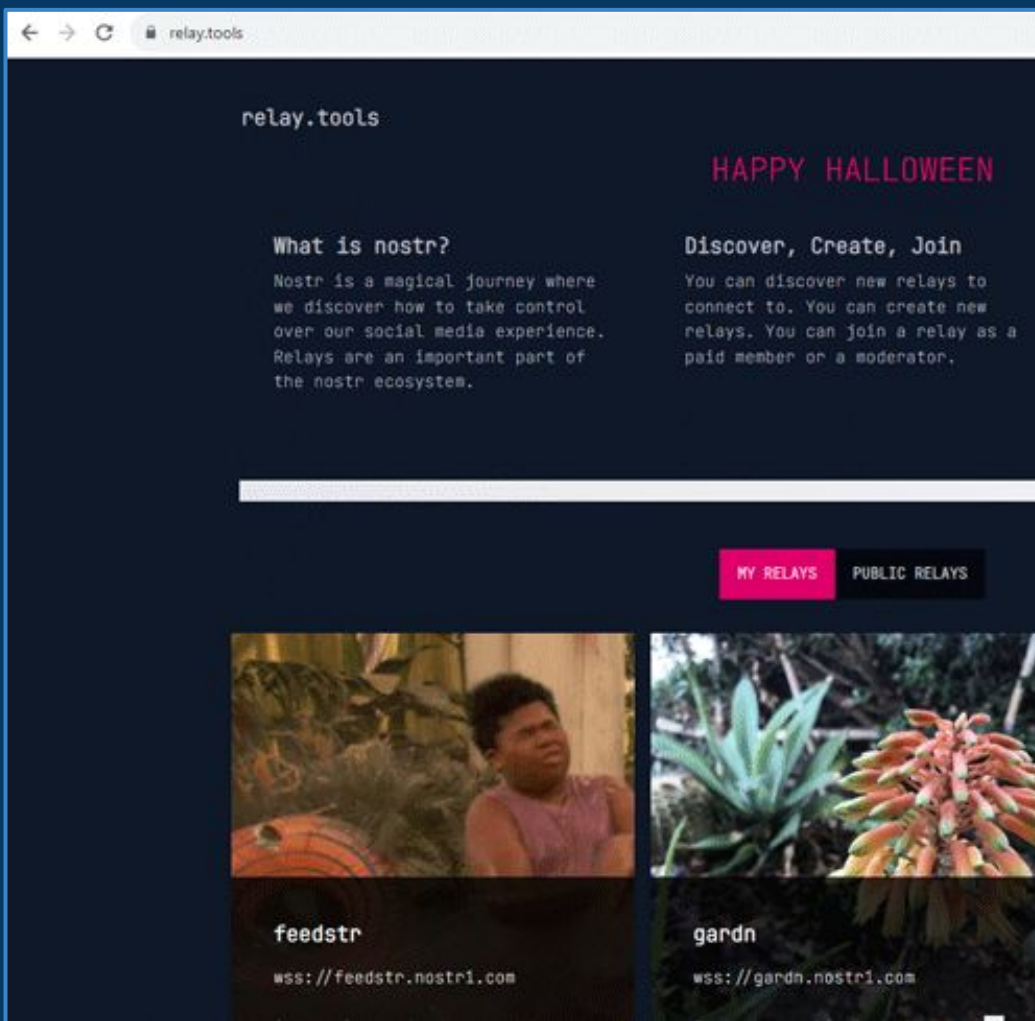
Use Case for Nostr:

Simple relay from <https://relay.tools/>

21,000 sats (~\$5.49) for 1 year

Simplicity: ★★☆☆☆

Regex, Style...



1. Is the post coming from our specific relay?
 - **Yes; continue:**
2. Is the post coming from our white label pubkey(s)?
 - **Yes! Print the full kind 1 event.**
Future implementations may only display posts that meet specific conditions (have photos, use tags, etc.), but for now we display any k1 event.
 - **No, it's from another pubkey.** Continue:
3. Does the post coming from this unknown pleb contain one of the required tags?
 - **Yes; continue:**
 - **No; ignore it** 🙄
4. Did the steadfast pleb include one or more images?
 - **Yes! Parse out the image(s) and display them.**
We will not display textual content, though we may display metadata (author name, posted date, etc.)
 - **No.** Sorry, you almost made it. Better luck next time.
 - *Future implementations may include AI-driven image filters to assure that photos are nature-themed.*

Lists

Allowed Keywords

Reason

nostrgardn

nostrgardn site feed

DELETE

gardn

nostrgardn site feed

DELETE

gardnstr

nostrgardn site feed

DELETE

nostrgarden

nostrgardn site feed

DELETE

ADD KEYWORD

Allowed Pubkeys

Reason

npub1u2cmd2atf9s43ajfgldccadtj7i9tn6j65puga4p3p08f20xuh54g7ku6

nostrgardn contributor (primary)

DELETE

ADD PUBKEY

Blocked Keywords

Reason

ADD KEYWORD



Meetup Meetups



Hacking ANANOSTR with Svelte (Jul 11, 2023)

1 Photo · Updated Jul 10, 2023



Demo day: Nostrgardn & Feedstr (Aug 28, 23)

2 Photos · Updated Aug 28, 2023



Nostr coffee hour on a Wednstr (Jun 28, 2023)

2 Photos · Updated Jun 28, 2023



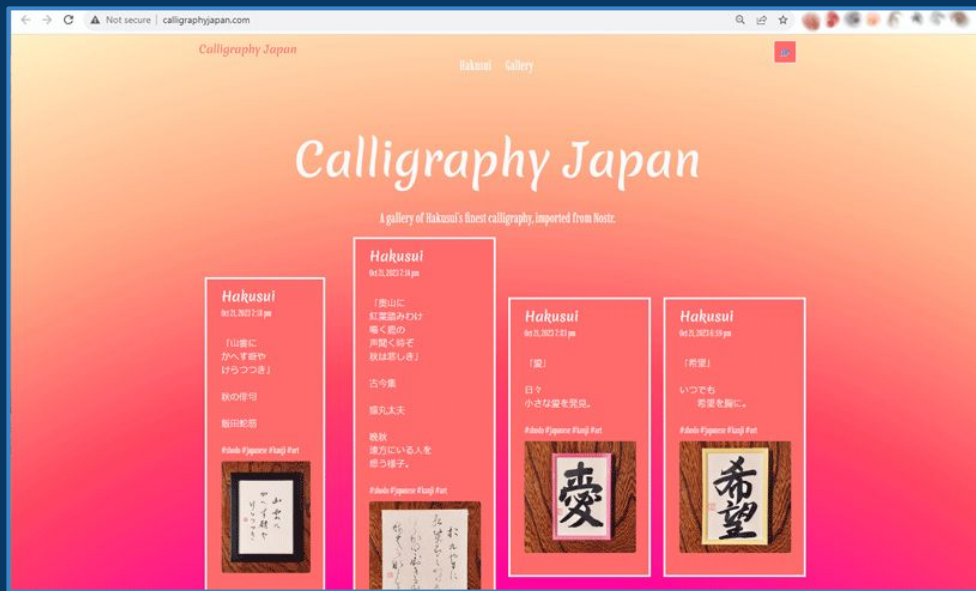
Exploring NDK (Sep 14, 2023)

1 Photo · Updated Sep 13, 2023





calligraphyjapan.com



Simple site for displaying an artist's calligraphy.

Use Case for Nostr:
Zapping, localization

Simplicity: ★★☆☆☆



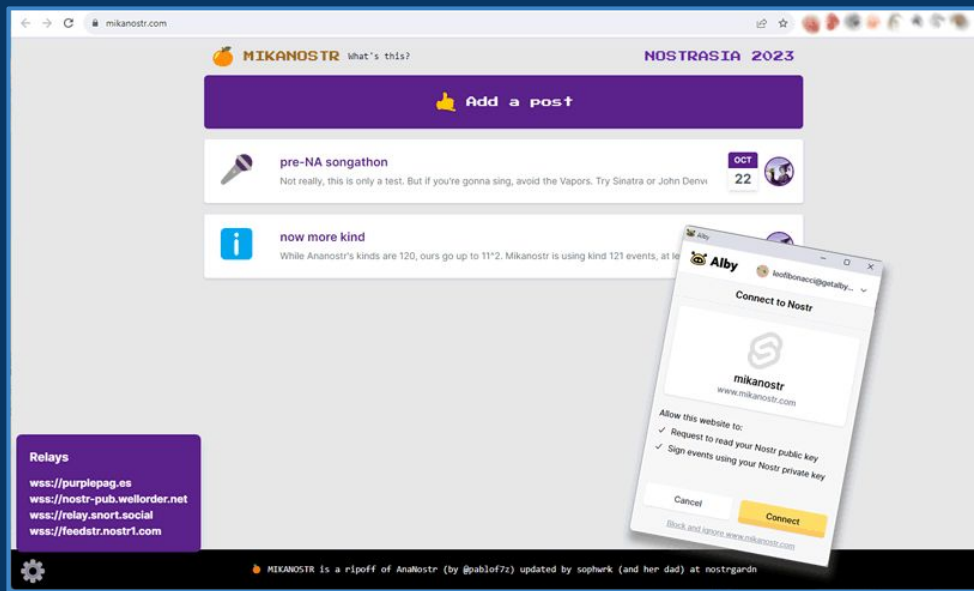


Video





mikanostr.com



A rewrite of Pablof7Z's ananostr.com for NostrAsia - now using NDK.

Use Case for Nostr:
Get advanced, learn by refactoring

Simplicity: ★★★★★★





hacking with
SVELTE

ANANOS TR

♥ Pura Vida!

Session Tips

Learn from our experiences

DO:

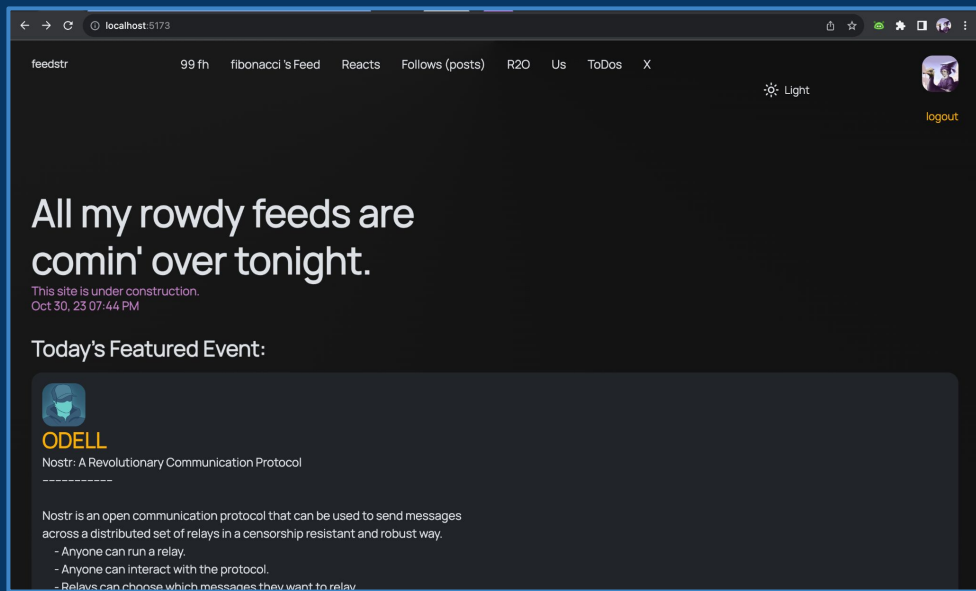
- Pull, whenever you start
- Commit more frequently, or when you're done for the session
- Rotate (or use pomodoros if solo) within larger session timebox (>90 min)

DON'T:

- Don't wait 3 weeks between sessions



feedstr.xyz (unlaunched)



Simple site for trying stuff...

Use Case for Nostr:

Simple relay from <https://relay.tools/>
21,000 sats (~\$5.49) for 1 year

Simplicity: ?★

Poll Activity...





NDK

Usage



Nostr-Specific Features



```
src > lib > stores > TS ndk.ts > ...
```

```
1  import { browser } from '$app/environment'
2  import NDK from '@nostr-dev-kit/ndk'
3  import { NDKNip07Signer } from '@nostr-dev-kit/ndk'
4  import { writable } from 'svelte/store'
5
6  let nip07signer
7  if (browser) {
8    |   nip07signer = new NDKNip07Signer()
9  }
10
11 import { defaultRelays } from '$lib/stores/relays'
12 //console.log('defaultRelays', defaultRelays);
13
14 const _ndk = new NDK({
15   |   explicitRelayUrls: defaultRelays,
16   |   signer: nip07signer,
17   |   debug: false
18 })
19 if (browser) {
20   |   _ndk.connect().then(() => console.log('NDK Connected'))
21 }
22
23 // Create a singleton instance that is the default export
24 const ndk = writable(_ndk)
25
26 export default ndk
```





TS relays.ts

src > lib > stores > TS relays.ts > ...

```
1  ///// the CURRENT relays that we are pulling from, reacting on, zapping on, etc.
2  export const currentRelays = [
3    'wss://relay.damus.io',
4    'wss://nostr-pub.wellorder.net',
5    'wss://feedstr.nostr1.com',
6    'wss://relay-jp.nostr.wirednet.jp',
7    'wss://relay.snort.social'
8  ]
9
10 ///// JAPANESE relays
11 export const japaneseRelays = [
12   'wss://yabu.me',
13   'wss://relay-jp.nostr.wirednet.jp',
14   'wss://nostr-relay.nokotaro.com',
15   'wss://relay-jp.nostr.moctane.com'
16 ]
17
18 ///// PROFILE relays
19 export const profileRelay = ['wss://purplepag.es']
20
21 ///// TESTING relays (to limit potentially embarrassing test posts)
22 export const testingRelays = [
23   'wss://purplepag.es',
24   'wss://feedstr.nostr1.com'
25 ]
```

+page.svelte 1, M X

src > routes > fh99 > +page.svelte > ...

```
1  <script lang="ts">
2      import ndk from '$lib/stores/ndk';
3      import type { NDKEvent } from '@nostr-dev-kit/ndk';
4      import PostCard from '$lib/components/PostCard.svelte';
5
6      let events: NDKEvent[] = [];
7      let maxCount = 0;
8      function fetchEventsFromSub() {
9          const sub = $ndkStore.subscribe({ kinds: [1] }, { closeOnEose: false });
10         sub.on('event', (event) => {
11             if (maxCount == 99) return;
12             events.push(event);
13             events = events;
14             maxCount++;
15         });
```



3



+page.svelte 1, M X

```
16         sub.on('notice', (notice) => {
17             console.log('NOTICE: ', notice);
18         });
19         sub.on('eose', () => {
20             console.log('EOSE');
21         });
22     }
23     fetchEventsFromSub();
24 </script>
25
26 {#if events}
27     <h2>Current Posts</h2>
28     <div>
29         {#each events as post}
30             {#key post}
31                 <PostCard {post} />
32             {/key}
33         {/each}
34     </div>
35 {/if}
```


PostCard.svelte

src > lib > components > PostCard.svelte

```
1  <script lang="ts">
2      import type { NDKEvent, NDKUser } from '@nostr-dev-kit/ndk';
3      import ndk from '$lib/stores/ndk';
4      import ndkForProfile from '$lib/stores/ndkForProfiles';
5      import { Avatar } from '@nostr-dev-kit/ndk-svelte-components';
6      import dayjs from 'dayjs';
7
8      export let post: NDKEvent;
9
10     let content: string = post.content;
11     let pid: string = post.id;
12
13     let author: NDKUser = $ndkForProfile.getUser({ hexpubkey: post.pubkey });
14     //console.log('author: ', author);
15
```



4

```

15
16 function linkify(text: string) {
17     var urlPattern = /\b(?:https?|ftp):\/\/[a-z0-9-+&@#\/%?~_!|:,.;]*[a-z0-9-+&@#\/%?~_]/gim;
18     var pseudoUrlPattern = /(^[^\/])(www\.[\S]+(\b|$))/gim;
19     var emailAddressPattern = /\w.]+@[a-zA-Z_-]+?(?:\.[a-zA-Z]{2,6})+/gim;
20     return text
21         .replace(urlPattern, '<a href="$&" target="_blank">$&</a>')
22         .replace(pseudoUrlPattern, '$1<a href="http://$2" target="_blank">$2</a>')
23         .replace(emailAddressPattern, '<a href="mailto:$&" target="_blank">$&</a>');
24 }
25
26 function addLineBreaks(text: string) {
27     var regex = /\n|\r{1}/gim;
28     return text.replace(regex, '<br />');
29 }
30
31 function convertLinkToImage(text: string) {
32     var imageHidingAsLinkPatternRegex =
33         /<a\s+href="(["]+\. (png|gif|webp|jpeg|jpg))"\s+target="_blank">([<]+)<\a>/g;
34     var imageSuffixPatternRegex = /\. (png|gif|webp|jpeg|jpg)$/g;
35     var br = '<br />';
36     var p = '<p>&nbsp;</p>';
37     return text.replace(imageHidingAsLinkPatternRegex, (_, link, alt) => {
38         var alt = link.replace(/^https?:\/\/\/, '').replace(imageSuffixPatternRegex, '');
39         return `${br}<a href="${link}" target="_blank"></a>${br}`
40     });
41 }
42 </script>

```

PostCard.svelte

```
44 <div class="eventBlock">
45   <span>
46     {#await author.fetchProfile() then eventSet}
47     <Avatar ndk={$ndk} npub={author.npub} />
48     <h3>
49       {author.profile?.displayName
50         ? author.profile.displayName
51         : author.profile?.name
52         ? author.profile.name
53         : 'unknown'}
49     </h3>
54   </await>
55 </span>
56 <p style="color: var(--text-1);">
57   {dayjs.unix(post.created_at ?? 0).format('MMM D, YYYY h:mm a')}
58 </p>
59 <p>{@html convertLinkToImage(addLineBreaks(linkify(content)))}</p>
60 </div>
61
62 <style>
63   h3 {
64     color: var(--brand);
65   }
66   h6 {
67     color: rgb(193, 127, 196);
68   }
69 </style>
```



Community

Sharing and Learning



Over the Nostr

- Make friends (not just with other devs)
 - **Be nice:** compliment their work
 - **Be brave:** share your progress
 - **Be curious:** ask how you can improve



At *meetup*

NOSTR
OC

- If there are no Nostr meetups near you, start one





Podcasts

Videos

Telegram





★ Future ★

Our Plans



Together

- More Features for Current Sites
 - Localization: 日本語, langue française
 - Guests can react, zap, etc.
 - Other features artists
- Other Projects
- Learning



Soph

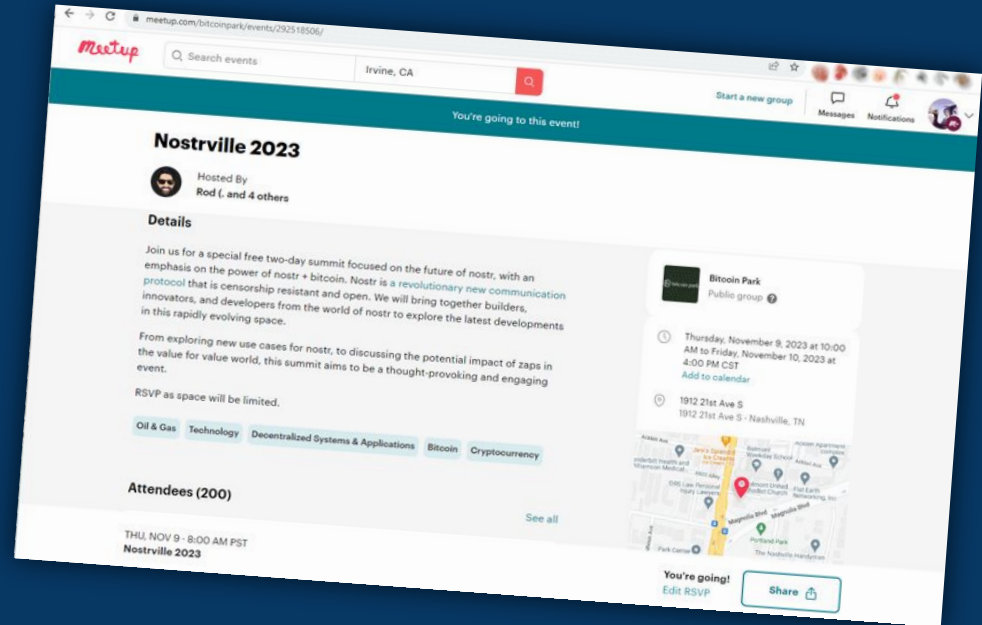
- College applications / AP tests
- Internship
-





Fibonacci

- Job in Freedom Tech (CTO, Delivery coach)
- **Nostrville** next week
- **My calling** is to host a Hacker space / cafe / podcast studio



An anime-style illustration of a man and a young girl flying through the air. The man, in the foreground, has dark hair, wears glasses, a green jacket over a red shirt, and has a wide, joyful expression with his mouth open. His arms are raised in the air with clenched fists. Behind him, a young girl with dark hair in pigtails, wearing an orange shirt, also has a joyful expression with her mouth open and her arms outstretched. They appear to be falling or flying downwards, as indicated by the motion lines and the perspective of the ground below. The background is a bright blue sky with soft white clouds. The overall mood is one of freedom and adventure.

Where will their journey take them next...

Let's Nostr!

@sopipip @fibonacci



ありがとうございました

Let's Nostr!

@sopipip @fibonacci