

performance.**now()**

unpacking bundling









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hello 

 nuxt.com •  nitro.unjs.io •  page-speed.dev •  regexp.dev
 fontaine.sh •  elk.zone •  firstcommit.is •  react-to-nuxt.com





have you used nuxt?

yes



roe.dev/v/yes

32

not yet

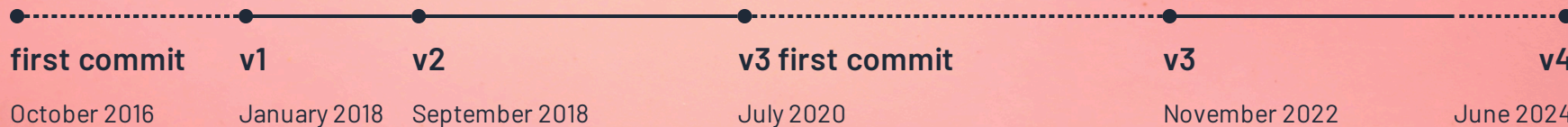


roe.dev/v/no

155

what is nuxt?

- ✦ a **progressive** framework built on **vue.js** and **nitro**
- ✦ **zero-effort** start with great dx
- ✦ **best practices** built-in
- ✦ fully **configurable** & easily **extensible**



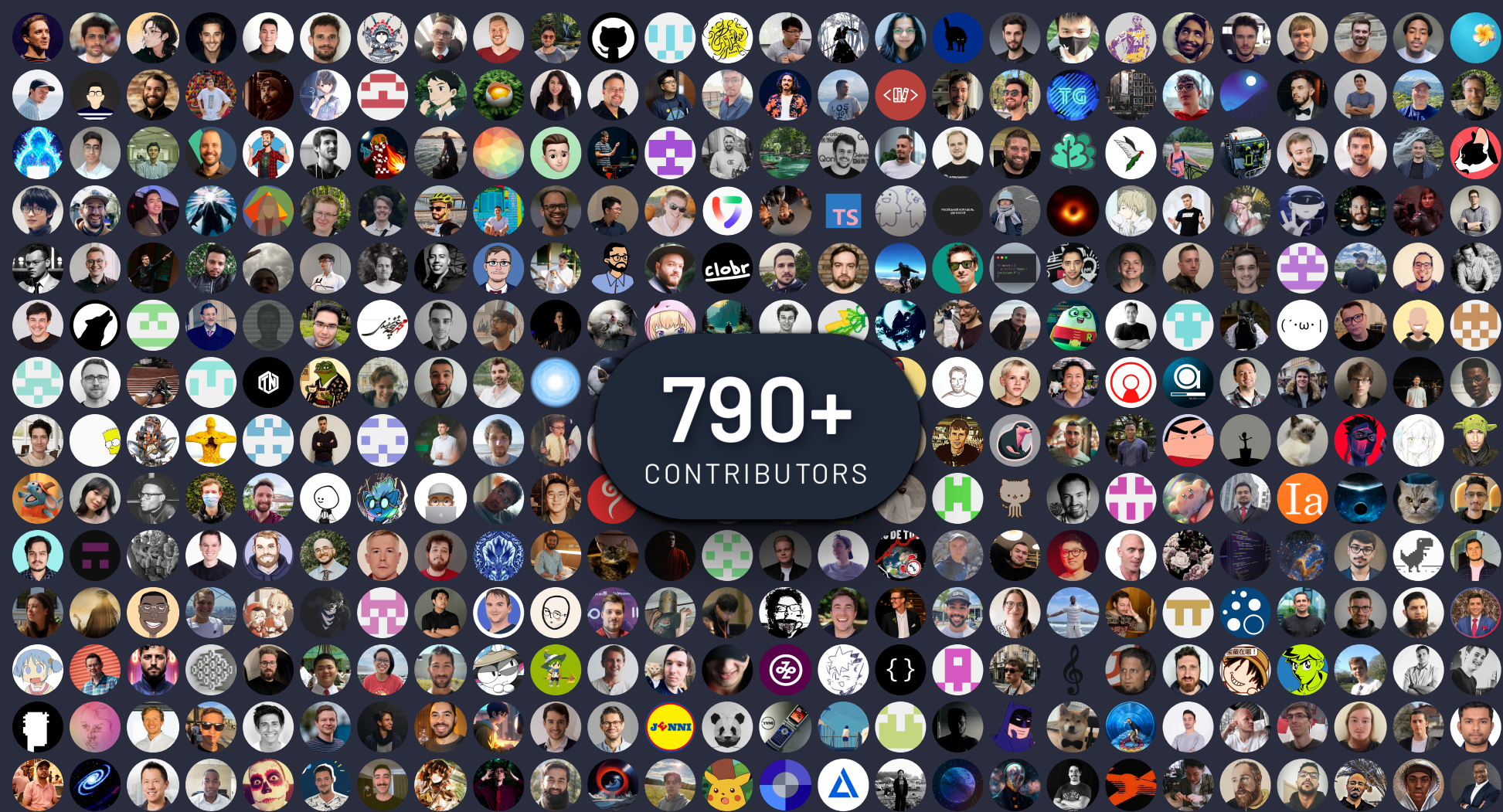


54.9 k

★ STARS

33.1 MILLION

📈 DOWNLOADS





javascript is
useful

expanding possibilities



expanding possibilities

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="stylesheet" href="/style.css" type="text/css">
    <title>A truly incredible site</title>
  </head>
  <body>
    <div id="app">
      <!-- -->
    </div>
    <script type="module" src="/app.js"></script>
  </body>
</html>
```

style inlining

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="stylesheet" href="/style.css" type="text/css">
    <title>A truly incredible site</title>
  </head>
  <!-- -->
</html>
```

1

style inlining

pages/index.vue

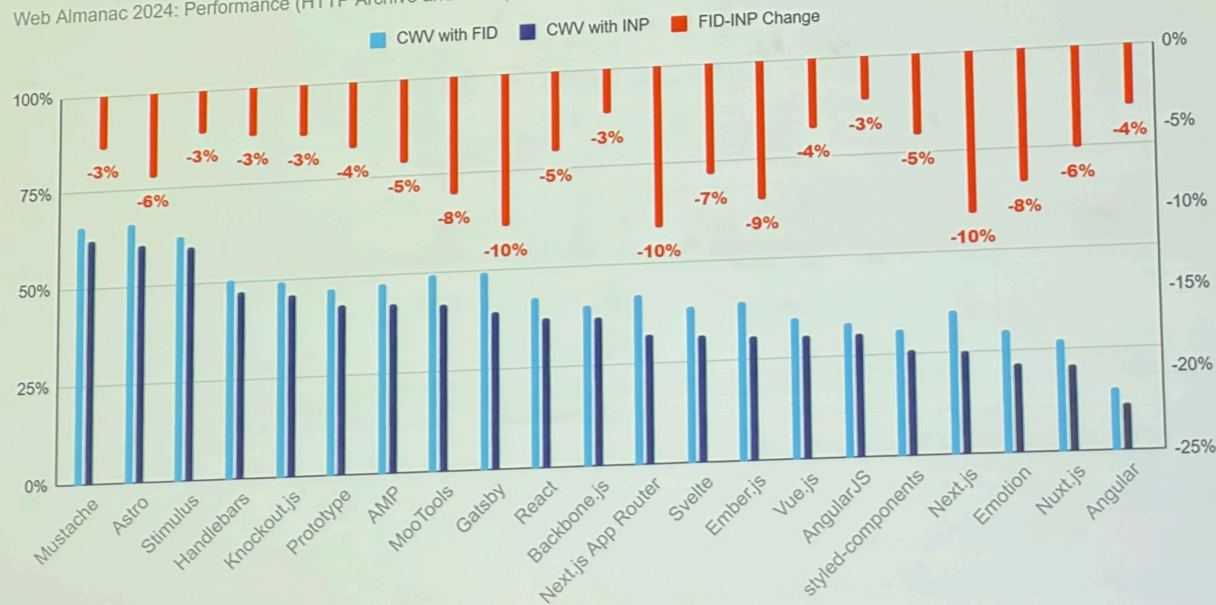
```
<template>
  <h1>Welcome</h1>
</template>
```

```
<style scoped>
h1 {
  font-size: 2rem;
}
</style>
```

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="stylesheet" href="/style.css" type="text/css">
    <link rel="stylesheet" href="/pages/index.css" type="text/css">
    <link rel="stylesheet" href="/components/MyComponent.css" type="text/css">
    <title>A truly incredible site</title>
  </head>
  <!-- -->
</html>
```


The Frontend Sadness Index

Web Almanac 2024: Performance (HTTP Archive and CrUX)



acknowledging user input

ht: @rick_viscomi

acknowledging user input

the cost of static

- ✦ every prerendered page gets a 'payload' and a dedicated URL

```
<link rel="preload" as="fetch" crossorigin="anonymous" href="/ama/_payload.json?abcb8c3b-7e6f">
```

2

```
const json = [  
  { "data": 1, "prerenderedAt": 17 },  
  [ "ShallowReactive", 2 ],  
  { "LayoutTheSiteFooter_rzlfFWPwq6": 3, "StaticMarkdownRender_lKTrT3sQQ0": 10 },  
  [ "Island", 4 ],  
  { "key": 5, "result": 6 },  
  "LayoutTheSiteFooter_rzlfFWPwq6",  
  { "head": 7 },  
  { "link": 8, "style": 9 },  
  [],  
  [],  
  [ "Island", 11 ],  
  { "key": 12, "result": 13 },  
  "StaticMarkdownRender_lKTrT3sQQ0",  
  { "head": 14 },  
  { "link": 15, "style": 16 },  
  [],  
  [],  
  1731576433964  
]
```


```
import { defineNuxtPlugin, useRouter } from 'nuxt/app'


export default defineNuxtPlugin(() => {
  useRouter().beforeResolve(async () => {
    await new Promise((resolve) => {
      setTimeout(resolve, 100)
      requestAnimationFrame(() => {
        setTimeout(resolve, 0)
      })
    })
  })
})
```



← Blog / Engineering

Demystifying INP: New tools and actionable insights

 Malte Ubi, CTO, Vercel

 9 min read

A technical guide exploring real-world strategies used to improve performance on Vercel's websites.

In March 2024 Interaction to Next Paint (INP) became part of Google's Core Web Vitals.

web font optimisation

- ✦ font configuration doesn't respond to *usage*
- ✦ third-party origins + preconnects
- ✦ font waterfalls
- ✦ contribution to layout shift



web font optimisation

- ✦ unjs/unifont
- ✦ unjs/fontaine

```
<template>  
  <h1> Hello World </h1>  
</template>
```

```
<style scoped>  
h1 {  
  font-family: 'Oswald', sans-serif;  
}  
</style>
```

chunking async refreshes experimental

```
<script setup lang="ts">
const route = useRoute()

const { data: repo } = await useAsyncData(async () => {
  const repo = await $fetch(`https://api.github.com/repos/${route.params.owner}/${route.params.repo}`)
  return repo
})
</script>

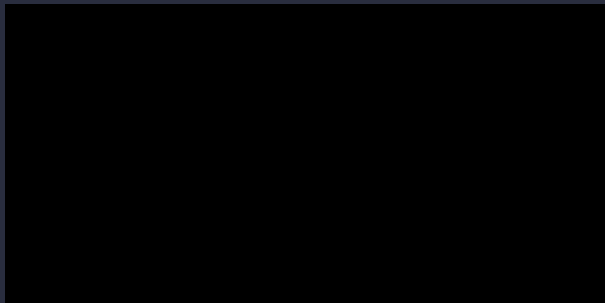
<template>
  <div> {{ repo.description }} </div>
</template>
```

-39 %
TOTAL JS

-66 %
UNUSED JS

third-party scripts

built-in facade components



third-party scripts

nuxt/scripts

- ✦ cookie consent
- ✦ defer loading until interactive
- ✦ preconnect hints
- ✦ script preloading

You may not need Google Tag Manager with Nuxt Scripts. GTM is 82kb and will slow down your site. Nuxt Scripts provides many features you can easily implement within your Nuxt app.

scripts.nuxt.com


third-party scripts

bundling

```
const { load } = useScript('https://example.com/script.js', {  
  trigger: 'manual'  
})
```

rebundling initial load experimental

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <link rel="preload" as="fetch" crossorigin="anonymous" href="/_payload.json?c5943ca5-b255-4abc-9e46-6014c3b9ffff6">
    <link rel="modulepreload" as="script" crossorigin href="/_nuxt/BKQMxkHa.js">
    <link rel="modulepreload" as="script" crossorigin href="/_nuxt/BJLjm6hm.js">
    <link rel="modulepreload" as="script" crossorigin href="/_nuxt/3z0kgwPW.js">
    <link rel="modulepreload" as="script" crossorigin href="/_nuxt/B-uwqUrw.js">
    <link rel="modulepreload" as="script" crossorigin href="/_nuxt/Dv2xHvpN.js">
    <link rel="modulepreload" as="script" crossorigin href="/_nuxt/Dg43CYwG.js">
    <link rel="modulepreload" as="script" crossorigin href="/_nuxt/DNjtNyfs.js">
    <link rel="modulepreload" as="script" crossorigin href="/_nuxt/W_Ax1ArN.js">
    <link rel="modulepreload" as="script" crossorigin href="/_nuxt/DLjpcXBA.js">
    <link rel="modulepreload" as="script" crossorigin href="/_nuxt/DsNWG3FT.js">
    <title>A truly incredible site</title>
```

A photograph of a room in the process of being renovated. The walls are covered in old, peeling wallpaper with a floral pattern. The ceiling is also damaged, with some wallpaper missing and a hole visible. The floor is covered in debris, including pieces of wallpaper and wood. Two white doors are visible: one on the left is open, and one on the right is closed. A window is on the far left. The text 'removing polyfills' is overlaid in the center, and 'unplugin-purge-polyfills' is overlaid below it.

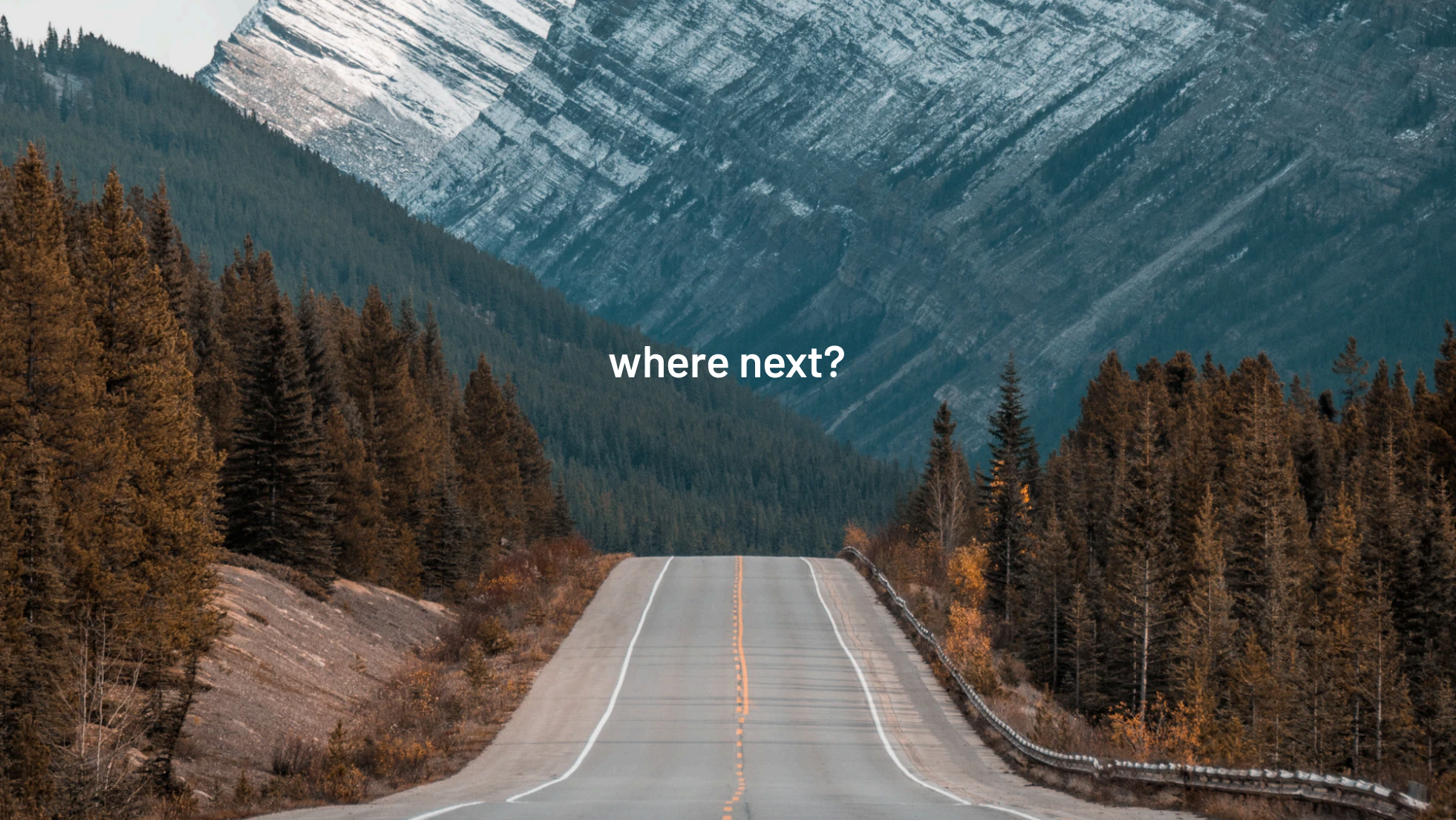
removing polyfills

unplugin-purge-polyfills

script reduction

skip generating js that isn't needed

```
export default defineNuxtConfig({  
  features: {  
    noScripts: true  
  },  
  // or instead  
  routeRules: {  
    '/marketing/**': { experimentalNoScripts: true }  
  }  
})
```


A scenic landscape photograph featuring a two-lane asphalt road that stretches from the bottom center towards the horizon. The road has a dashed yellow center line and solid white edge lines. On either side of the road are dense forests of evergreen trees, some with autumnal yellow and orange foliage. In the background, a massive, steep mountain rises, its upper sections covered in snow and showing distinct horizontal geological strata. The sky is a pale, overcast blue. The text "where next?" is centered in the middle of the image in a white, sans-serif font.

where next?

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interested ... ?

- ✦ check out the docs on nuxt.com
- ✦ follow [@nuxt.com](https://nuxt.com) on Bluesky
- ✦ join chat.nuxt.dev to discuss
- ✦ and a final offer 🙏

roe.dev/chat

