

Leave your legacy code
behind and go Nuxt



NUXTJS



Debbie O'Brien

Frontend Tech Lead



@Patterson Agency in Mallorca



Mentor @OpenClassrooms



Tech Degree Moderator @Treehouse



Contributor @webpack



Contributor @Nuxt



Writer @Ultimate Courses



Teacher @Vue School



debs_obrien



Debbie O'Brien

We have a problem

Too much legacy code

Hard to scale

Front and backend code mixed together

Too many dependencies

Old Tech stacks

JSF

PHP

ASP

Front and Back mixed together

Unmaintainable Code

```
<Ui:fragment rendered="#{CatalogoBean.campaign.countdown}">
  <div style="width:360px;margin:0 auto;margin-top:70px;">
    <span style="display:none;" id="text_days">
      <g:get name="listado" anchorid="landing.days" defaulttext="DAYS"/></span>
      <p id="countdown" style="width:500px;font-size:30px;margin-top:50px;color:#fff;"></p>
    </div>
  </ui:fragment>
```



Bad Performance



Performance



Accessibility



Best Practices



SEO



Progressive Web App



Performance



Accessibility



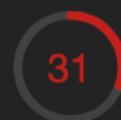
Best Practices



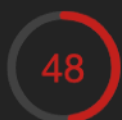
SEO



Progressive Web App



Performance



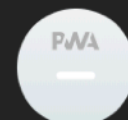
Accessibility



Best Practices



SEO



Progressive Web App



Performance



Accessibility



Best Practices



SEO



Progressive Web App

What are we doing about it?

Nothing

Dumping more code on top of it



What? Why?

No Time

No Money

Afraid to take the migration step



What should we be doing?

Migrating



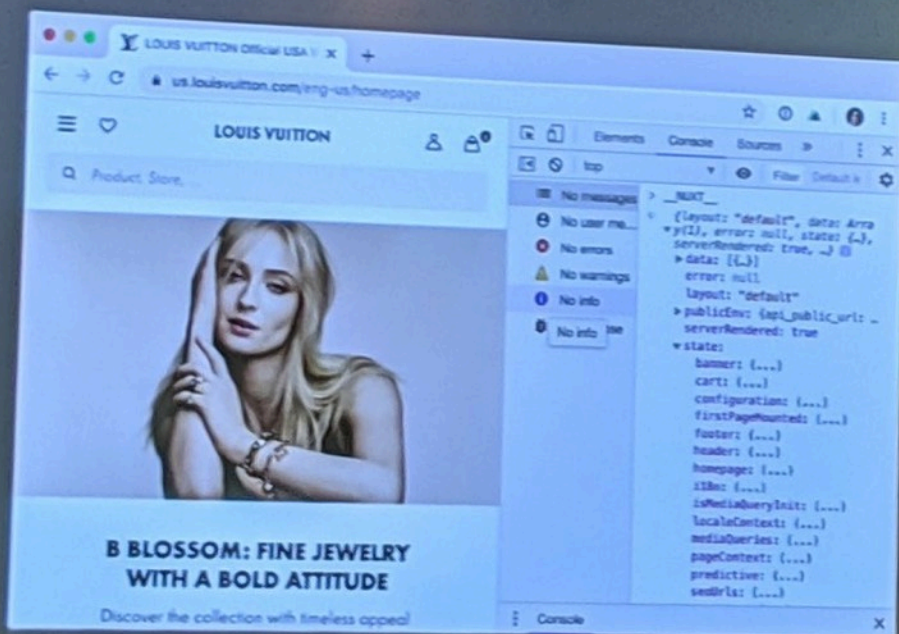
Where do we start?

Piece by piece

Break up your project

Create and ship

Louis Vuitton running on Vue & Nuxt



The screenshot shows a web browser displaying the Louis Vuitton homepage. The browser's address bar shows the URL `us.louisvuitton.com/eng-us/homepage`. The page features a navigation menu with the Louis Vuitton logo, a search bar, and a main banner image of a woman. Below the image, the text reads: **B BLOSSOM: FINE JEWELRY WITH A BOLD ATTITUDE**. At the bottom of the banner, it says: *Discover the collection with timeless appeal*.

The Nuxt.js DevTools console is open on the right side of the browser window. The console shows the following structure for the `__NUXT__` object:

```
{
  __NUXT__: {
    [layout: "default", data: Arrr...]: {
      errors: null,
      state: {},
      serverRendered: true,
      data: {},
      error: null,
      layout: "default",
      publicIn: {api_public_url: ...},
      serverRendered: true,
      state: {
        banners: {},
        cart: {},
        configuration: {},
        firstPageMounted: {},
        footer: {},
        header: {},
        homepage: {},
        sidebar: {},
        isMediaQueryInit: {},
        localeContext: {},
        mediaQueries: {},
        pageContext: {},
        predictive: {},
        sendBr: {}
      }
    }
  }
}
```


Where do we start?

Convince yourself
then your team
then your boss



Where do we start?

Know your tools

Know what your capable of

Know what you can deliver

Where do we start?

Run performance tests to compare

Create prototypes

Just do it

Go Nuxt

Patterson Travel: Case Study

Separate Front and Back

From
mixed code in php
to
Nuxt app on the front
Rest Api in the back

The JSON war



Decide who is responsible for what

Header and Footer - Front
Content and shopping cart - Back



Invest in your team



Frontend *Masters*

Lead your code

Make sure your code looks like it was written by one person

Create Standards



ESLint



Prettier



Pre Commit Hooks: Husky

```
"scripts": {  
  "",  
},  
  
"husky": {  
  "hooks": {  
    "pre-commit": "cross-env PRE_COMMIT=true lint-staged"  
  }  
},
```

Use Pull Requests

D **dobrien** 4/10/2019
i don't understand

T **tmichel**
Same review
value and

D **dobrien** 4/10/2019
are

D **dobrien**
can we n

T **tmichel**
On it, ma

T **tmichel**
done (wi

D **dobrien**
perfect

D **dobrien** completed the pull request

✓ Approved by **T** **tmichel**

T **tmichel** joined as a reviewer

D **dobrien** set the pull request to automatically complete when all policies succeed.

FT [PattersonTravelWeb]\Front Team was added as a required reviewer

Created by **D** **dobrien**

D **dobrien**
ok good be
an example:
<https://vuejs.org/v2/guide/instance-change-in-them>

Resolved ▾
ate. See the docs for

a change in all of
-eq ▾

Resolved ▾

Test your code



Tests should give you
confidence that you aren't
shipping broken software.



Sarah Dayan

Product Manager @Alcoba

Tests
confiden
shippin



Cypress

```
describe('My First Test', function() {  
  it('clicking "type" navigates to a new url', function() {  
    cy.visit('https://nuxtjs.org')  
  
    cy.contains('type').click()  
  
    cy.url().should('include', '/guide/installation')  
  })  
})
```



Vue Testing Library

```
test('increments value on click', async () => {  
  const {getByText} = render(TestComponent)  
  
  getByText('Times clicked: 0')  
  
  const button = getByText('increment')  
  
  await fireEvent.click(button)  
  
  getByText('Times clicked: 1')  
})
```



Document your code

Use VuePress

Frontend Documentation



[Home](#)

[Development](#)

[Vue](#)

[Nuxt](#)

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travel

Frontend Documentation

Everyting you need to know to work on this project

Get Started →

Generate your files

Use Hygen

```
$ hygen new component
```

```
✓ Name: · base debbie
```

```
✓ Blocks: · template, script, style
```

```
Loaded templates: _templates
```

```
  added: components/_base-debbie.vue
```

```
  added: components/_base-debbie.unit.js
```

```
✨ Done in 6.01s.
```

Think first, code later

Think and plan or draw before you write



Styles

Use Tailwind

end of conversation



Styles

Stop adding big libraries of styles that you never use

Stop creating styles for everything

Think utilities first



Version 2.2 Improvements

Theme presets

New components

Hundreds of new
SASS variables

Easier process for
modifying SASS
variables

Improved
Documentation

Releases December
2019

Styles

CSS Stats

GitHub

[http://\[REDACTED\]/assets/css/styles.css](http://[REDACTED]/assets/css/styles.css)

1.18 MB

12.4k

Rules

16.3k

Selectors

30.2k

Declarations

220

Properties

Total Declarations

Font Size

2,260

Float

532

Width

1,878

Height

765

Color

1,946

Background Color

1,195

Styles

CSS Stats

[GitHub](#)

**Patterson.travel - Agencia de Viajes
Especializada en Empresas**

16 KB

382

Rules

449

Selectors

502

Declarations

74

Properties

Total Declarations

Font Size

31

Float

0

Width

40

Height

12

Color

18

Background Color

15

Styles

Utilities classes === less code to maintain

A utility-first CSS framework



Tailwind CSS

Add a PWA



Kyle Simpson

Kyle Simpson is an evangelist of the open web, passionate about all things JavaScript. He writes books, teaches JavaScript, speaks, and contributes to the world of OSS. Developers have watched over 300,000 hours of Kyle's courses here on Frontend Masters!



Learn How To Build Service Workers for Sites and PWAs
with Kyle Simpson

Or you can Just use Nuxt

Nuxt PWA

Registers a service worker for offline caching

generates `manifest.json` file

adds SEO friendly meta data

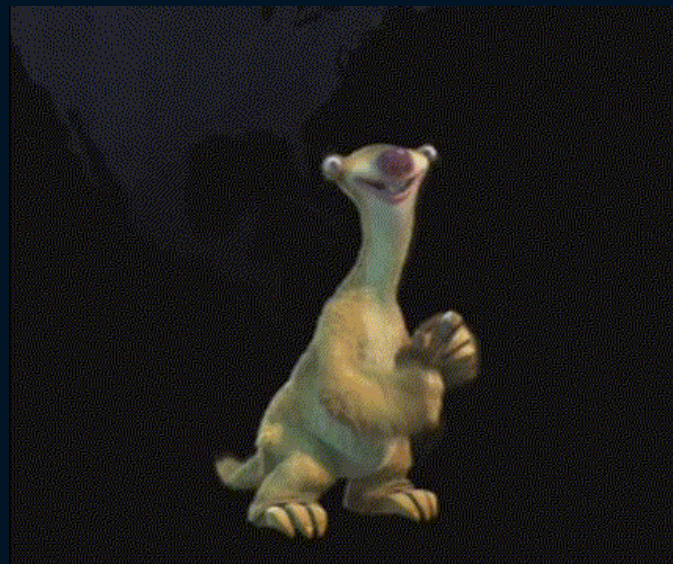
generates different size app icons

Add a PWA in 3 steps

1 `yarn add @nuxtjs/pwa`

```
2 {  
  modules: [  
    '@nuxtjs/pwa',  
  ],  
}
```

3 upload the image to static folder



PWA Tips

By default the PWA name === package.json name

Set it in Nuxt to be merged with your meta

```
meta: {  
  name: 'Patterson Travel',  
  description: 'Patterson Travel Agency',  
  author: 'Patterson Agency',  
},
```

Build Static Sites

Faster

Fully Dynamic

Hydration process

SEO Benefits

Static Site

Static generated / pre rendered means **pre render** the application **once during build** and **serve it as a Single Page Application**

Why Care

We have fast network

Our page loads fast already





2 seconds and I'm gone



Build sites for everyone



Build Static Sites

`nuxt generate`

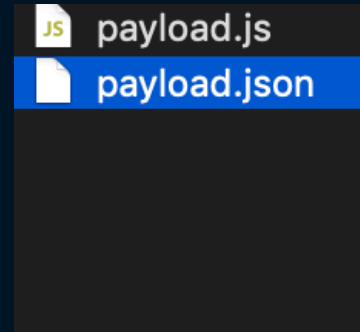
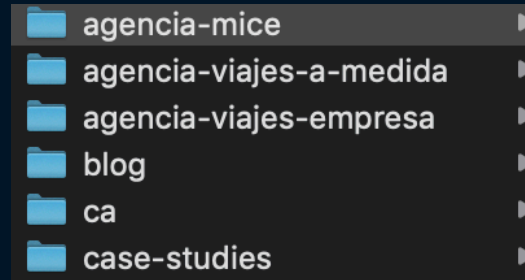
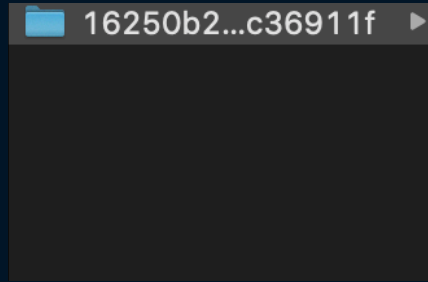
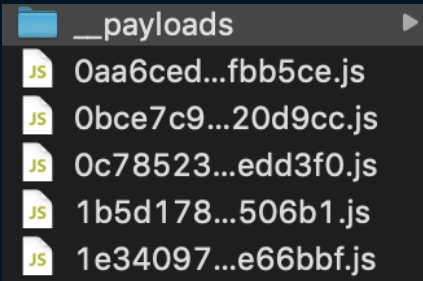
Full Static module

Call the api once at build time

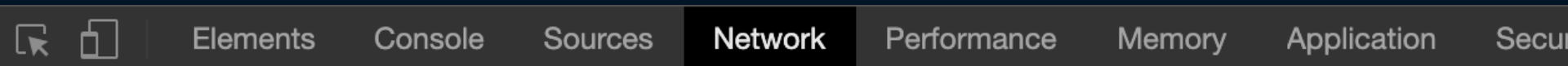
Call the payload instead of the api on Navigation

Works offline




Payloads



Calling the Payload



Name

-  payload.json
127.0.0.1/_nuxt/__payloads/db9c621b9fea5764c69e/en/events
-  payload.json
/_nuxt/__payloads/db9c621b9fea5764c69e/en
-  payload.json
127.0.0.1/_nuxt/__payloads/db9c621b9fea5764c69e/en

Full Static Module

works offline









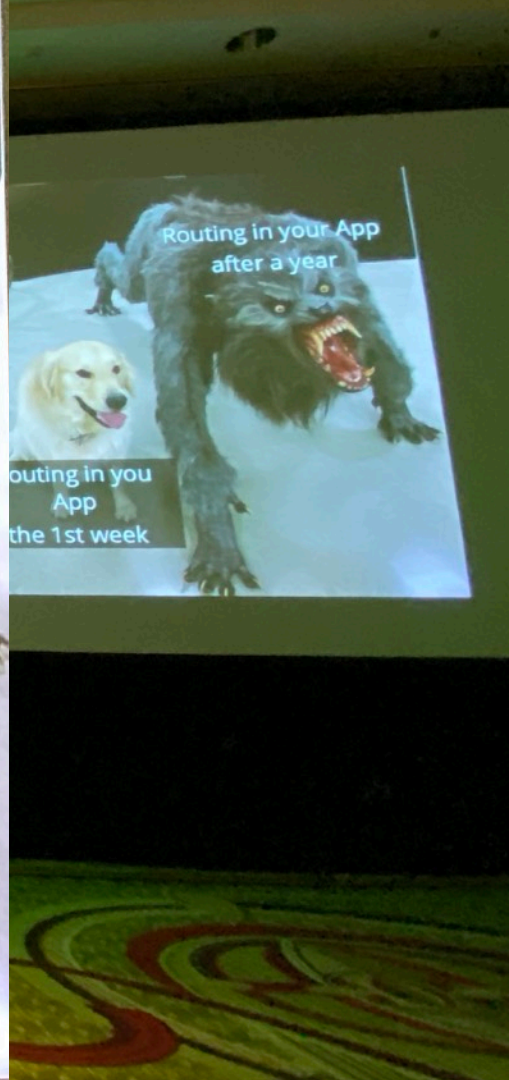
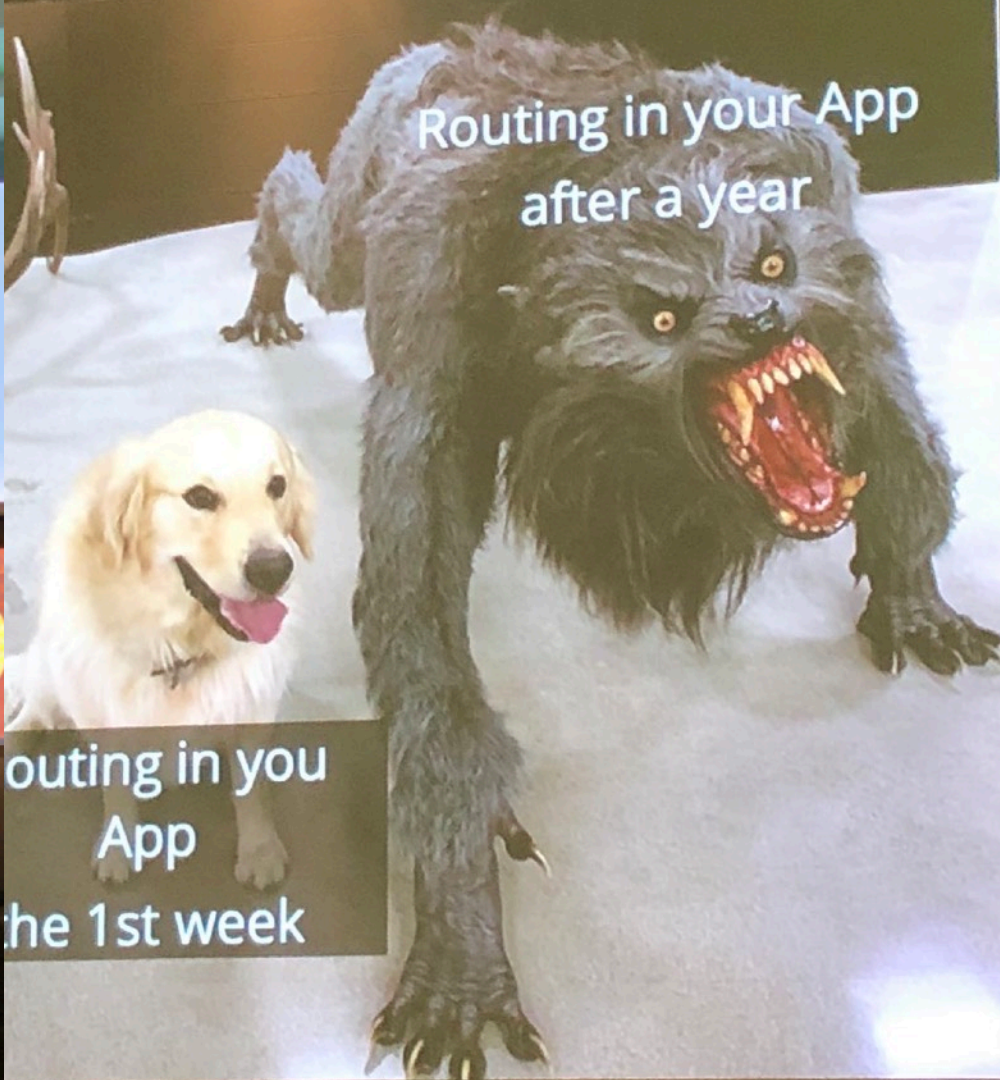
Static Site + SPA

Use the exclude option

```
generate: {  
  fallback: true,  
  exclude: [/booking/]  
}
```

Pages Folder

- ∨  pages
 - >  blog
 - >  booking
 - >  case-studies
 - >  events
 - >  payment
 - ∨ about.vue
 - ∨ booking.vue
 - ∨ conditions.vue
 - ∨ contact.vue



Dynamic Pages

▼ `_slug.vue`

```
generate: {  
  routes: function () {  
    return axios.get('https://my-api/blog')  
      .then((res) => {  
        return res.data.map((post) => {  
          return '/blog/' + post.slug  
        })  
      })  
  }  
}
```

Nuxt Crawler

Will crawl all your `<nuxt-link>` tags and auto generate your dynamic pages at build time

Impatient?

<https://github.com/nuxt/nuxtjs.org/tree/master/modules/static>

<https://github.com/nuxt/nuxtjs.org/tree/master/modules/crawler>

Run Performance Tests

Be aware of what your shipping

Use the wepack analyser

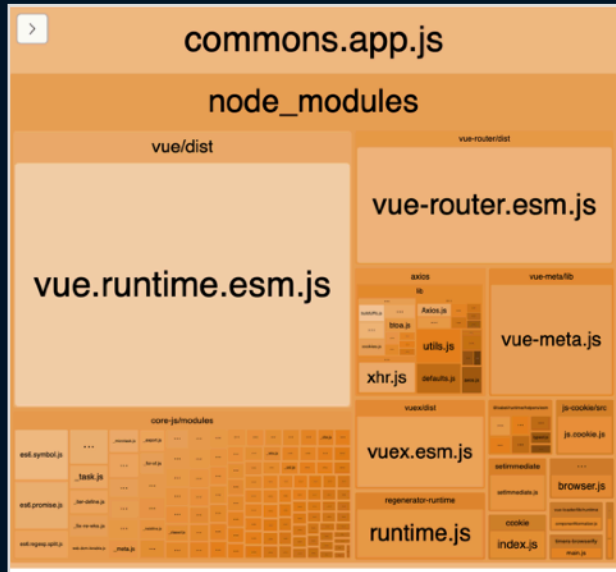
Run an audit in chrome dev tools

Check your css with CSS Stats

Analyse your bundle

Asset	Size	Chunks	Chunk Names
../server/modern.manifest.json	21.8 KiB	[emitted]	
16bffb63528b153637fe.js	4.83 KiB	9	[emitted] pages/bookingIspo
181d36c8add2de554ea5.js	9.1 KiB	17	[emitted] pages/mice
28fbb8e52ec02b17a688.js	1.36 KiB	18	[emitted] pages/privacy
3c7cd4eba5d435aedad6.js	75.4 KiB	23	[emitted] vendors.app
45406ac61bdab28ce68e.js	4.25 KiB	29	[emitted]
4b9052f8a9694e171a60.js	9.1 KiB	20	[emitted] pages/trips
4cc3066f478255fa048a.js	9.07 KiB	16	[emitted] pages/index
578a584e37899ad1c1f9.js	1.89 KiB	27	[emitted]
608145bd5dfd9b40e6eb.js	1.13 KiB	11	[emitted] pages/conditions
688ed2170e40cdfc24af.js	1.69 KiB	13	[emitted] pages/cookies
6eadb7a4154d6f144d69.js	9.14 KiB	19	[emitted] pages/services
700a9f66bdbf5ab1252b.js	1.24 KiB	26	[emitted]
72aaf5ae8dab1b21b359.js	3.04 KiB	24	[emitted]
77b29359a95a5f57b158.js	45.4 KiB	1	[emitted] lang-ca
7c435a8e36a21a39f9fa.js	9.72 KiB	14	[emitted] pages/corporate
81899d97c56b805f37b0.js	1.11 KiB	5	[emitted]
942eb14595052a9c6812.js	45.8 KiB	3	[emitted] lang-es
97205f6fd1369238f7e0.js	6.29 KiB	10	[emitted] pages/bookings
9d3786f2b9b7ab658fd4.js	2.52 KiB	25	[emitted]
9d696e8cf42c3e8d9d10.js	8.45 KiB	8	[emitted] pages/about
9de5eaa41b677a8e34c0.js	850 bytes	28	[emitted]
LICENSES	1.19 KiB	[emitted]	
b64543b2ee461ae816b7.js	42.5 KiB	2	[emitted] lang-en

yarn build -a



FoamTree

Improve your code

Nuxt gives you code splitting by routes for free

But **you** have to:

Code Split your components



How does Code Splitting work?

How a Module gets to the BROWSER with webpack!

Module
dep | dep | dep | dep | dep | dep

Hi! I'm a module!! I can't wait to work in the BROWSER!

Wow! This is cozy! I've been shuffled around and sorted topologically, are we there yet?

Whoa there!! Cool your jets. We need to get you ready for the Big Show!

First, you'll need to jump in this container. We'll be using some magic to help you lose weight!

Compilation

Entry point

Module

Module
dep | dep | dep | dep | dep | dep

Compilation

In finally rendered!!! Browserland and be safe to have it!

require and import statements have to go!! The Parser gave me special instructions for "rendering" those dependencies you have there!!! Dependency Templates: Dependency Factory.

Chunk template
module template
module template
dep template

Dep. Factory

Dep. Template

```
function(require, module, webpack) {  
  var webpack_harmonized = ...  
}  
  
function(..., ...webpack_exports) {  
  ...  
}
```

Code Split your components

Just change this:

```
import TheFooter from '~/components/the-footer'
```

```
components: {  
  TheFooter,  
},
```

to this:

```
components: {  
  TheFooter: () => import('~/components/the-footer'),  
},
```

Lazy Load your translations

```
locales: [  
  {  
    code: 'en',  
    iso: 'en-US',  
    name: 'English',  
    file: 'en.js',  
  },  
],
```

```
lazy: true,  
langDir: 'i18n/',
```

Lazy load your images

```
yarn add v-lazy-image
```

```
import Vue from 'vue'  
import VLazyImage from  
  'v-lazy-image'  
Vue.component('VLazyImage', VLazyImage)
```

```
plugins: [  
  '~/plugins/lazy-load-images.js',  
],
```

Use Cloudinary for your images

```
<v-lazy-image src="https://res.cloudinary.com/idemo/image/upload/  
q_auto,f_auto/cloudinary"/>
```



Put Accessibility first

Use labels for forms

Use aria tags

Be careful with colour contrasts

Use your tools

Chrome dev tools for accessibility

patterson_
travel

Congress bookings

Services

About us

Contact

Client Area

EN ▾

The screenshot shows a Chrome DevTools accessibility panel for a selected element. The element is a navigation link with the following properties:

- Element: `a.text-nav.nav-item.text-4xl.xl:text-base.border-s...` (60.5 x 32)
- Color: `#5E5D5D`
- Font: `16px "Circular Std ..."`
- Padding: `0px 0px 8px`
- Contrast: `5.04`

Hello, we are patterson.travel, the co-

Modern mode

Build two versions of your app:

modern bundle: browsers that support **ES modules**,

legacy bundle: targets older browsers that do not

```
"build": "nuxt build --modern",  
"generate": "nuxt generate --modern",
```



THE FUTURE IS IN TYPESCRIPT

- Easier to contribute
- Less regressions
- Improved discoverability



Nuxt TypeScript

TypeScript Support for Nuxt.js

Be proud of your code



Hello, we are Patterson Travel, the co-

Elements Console Sources Network Performance **Audits** Memory Application Security Layers

12:40:54 - patterson.travel

https://patterson.travel/



Performance



Accessibility



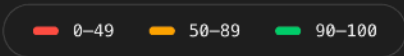
Best Practices



SEO



Progressive Web App



Performance

So what are you waiting for?

Do you still have an excuse or
are you going to leave your
legacy code behind?

Are you
NUXT?

Thank you





Thank you

Debbie O'Brien

Frontend Tech Lead
Consultant

Open Source Contributor

<https://github.com/debs-obrien/nuxt-boilerplate-project>



@debs_obrien