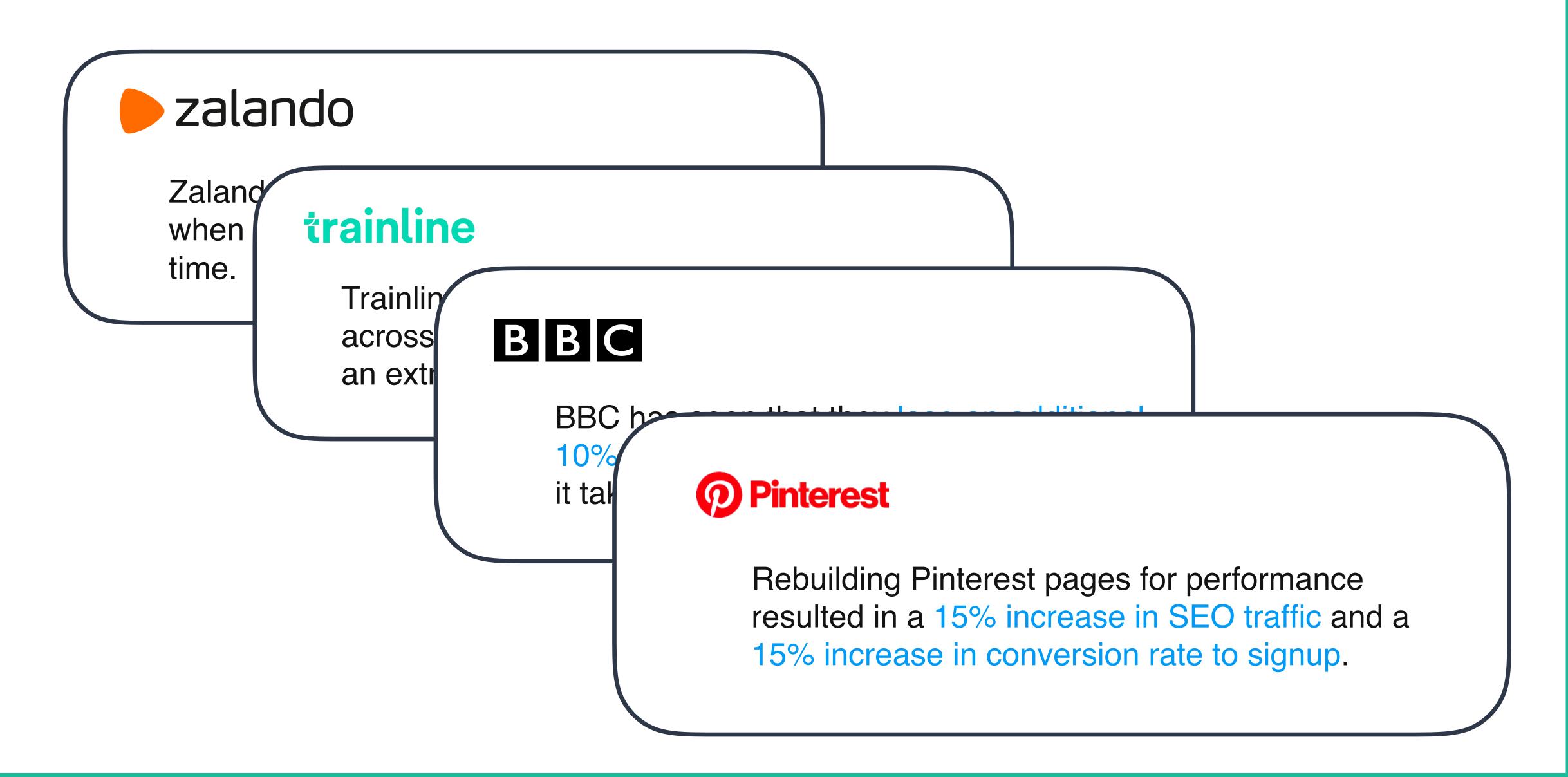
FAST BY DEFAULT \$\square\$

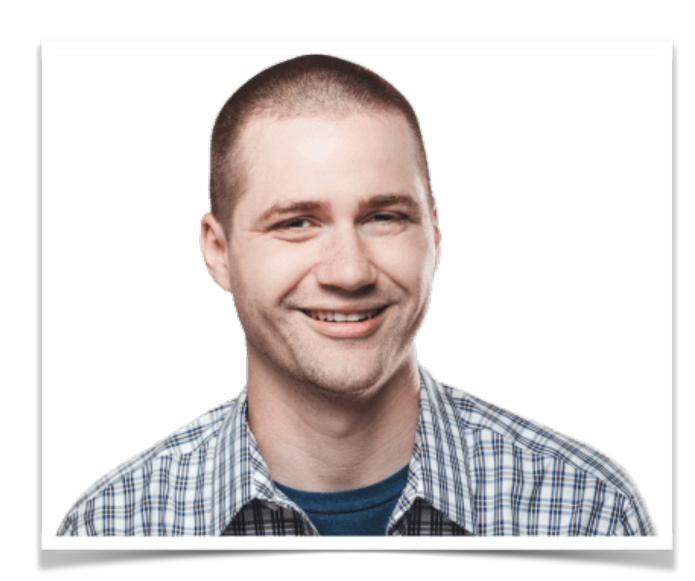
Near Instant Load Times at Scale with GatsbyJS

PERFORMANCE MATTERS

PERFORMANCE MATTERS FOR YOUR BUSINESS



THE ETHICS OF WEB PERFORMANCE

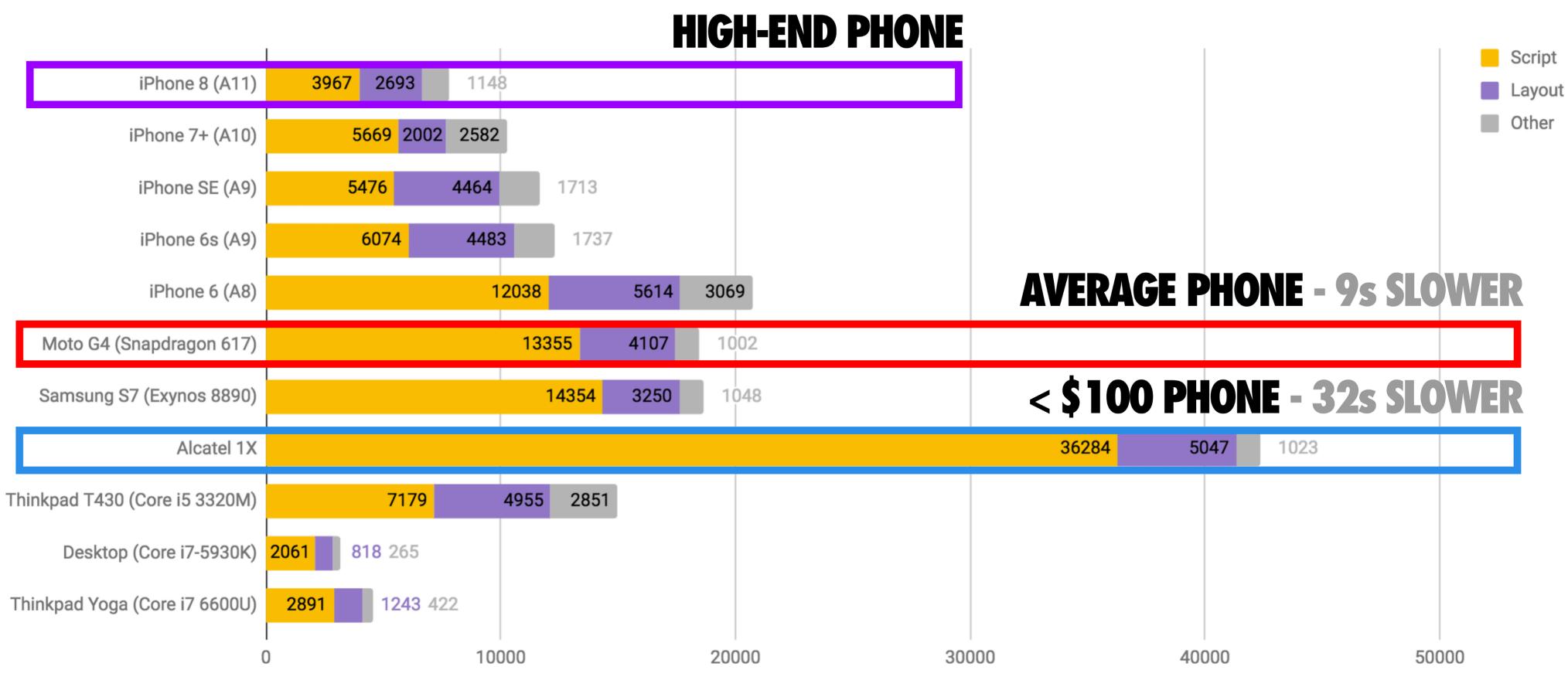


"Poor performance can, and does, lead to exclusion."

— Tim Kadlek

PERFORMANCE MATTERS FOR INCLUSION

JS PROCESSING FOR CNN.COM



Source: https://v8.dev/blog/cost-of-javascript-2019

PERFORMANCE MATTERS FOR INCLUSION



Source: https://blog.chriszacharias.com/page-weight-matters

PERFORMANCE MATTERS FOR INCLUSION

In 2009, YouTube engineer Chris Zacharias tackled the page weight of <u>youtube.com</u> and reduced it from 1.2MB to less than 100KB.

"He pushed the feature in production, waited for the results of how much he'd have improved the performance. After a week of data collection, the numbers came back... and they were baffling. The average aggregate page latency under the new version had actually INCREASED."



"Under the new version, despite it taking over two minutes to get to the first frame of video, watching a video actually became a real possibility [in developing countries]. [...] Large numbers of people who were previously unable to use YouTube were suddenly able

PERFORMANCE ENABLES NEW USERS



PERFORMANCE MATTERS FOR THE ENVIRONMENT

"[Performance good practices] have well-known benefits to usability, but are also acts of environmental protection."



- Cennydd Bowles, Future Ethics

PERFORMANCE MATTERS FOR THE ENVIRONMENT



"I need to buy a new phone"



"My battery does not last a full day anymore"

Source: https://timkadlec.com/remembers/2019-01-09-the-ethics-of-performance/

PERFORMANCE MATTERS FOR THE ENVIRONMENT

New devices hide performance issues on our websites

Pushing users to buy new devices



Reducing the perceived need to work on performance

Making sites slower on old devices



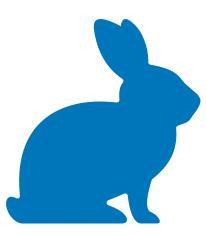
Numele meu este Matthieu

VP of Engineering at Theodo

#1 time in Romania - Colorblind



HOW TO ACHIEVE PERFORMANCE ON THE WEB?



TODAY MARKS THE REIGN OF CLIENT-RENDERED SINGLE PAGE APPLICATIONS

Angular, React, Vue...

HTML is computed client-side

Interactiveness

SINGLE PAGE APPLICATIONS MADE GREAT PRODUCTS POSSIBLE



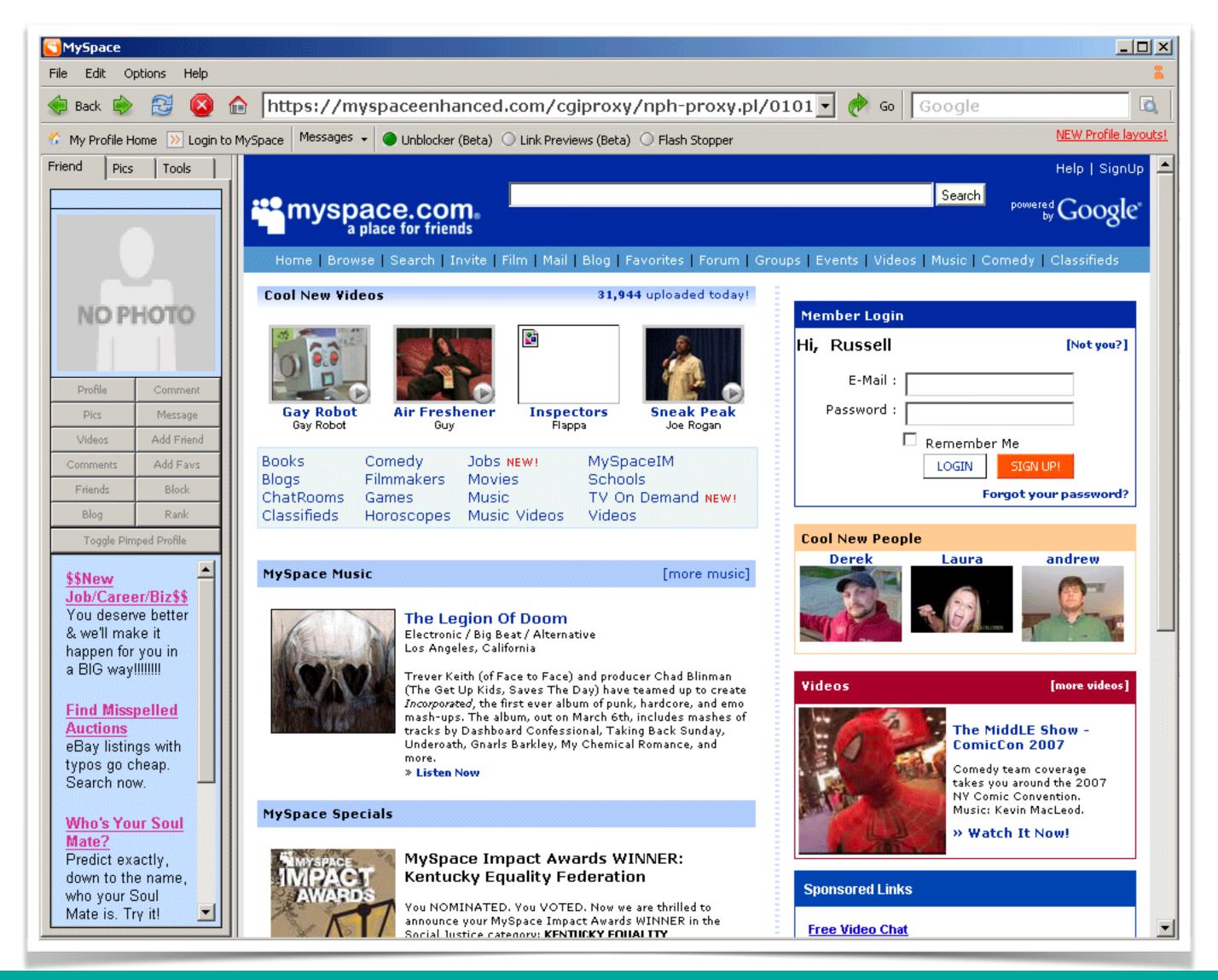
BEFORE THEN, SERVER RENDERING WAS KING



HTML is computed server-side

Dynamic

OL' MYSPACE



IN THE BEGINNING THERE WAS STATIC

Pure HTML files served by server

First ever page on the Web

Simple. Scalable. Fast

WE LOST PERFORMANCE DURING OUR JOURNEY

The growth of the average web page 702 KB 2010 2012 1042 KB 2344 KB 2015

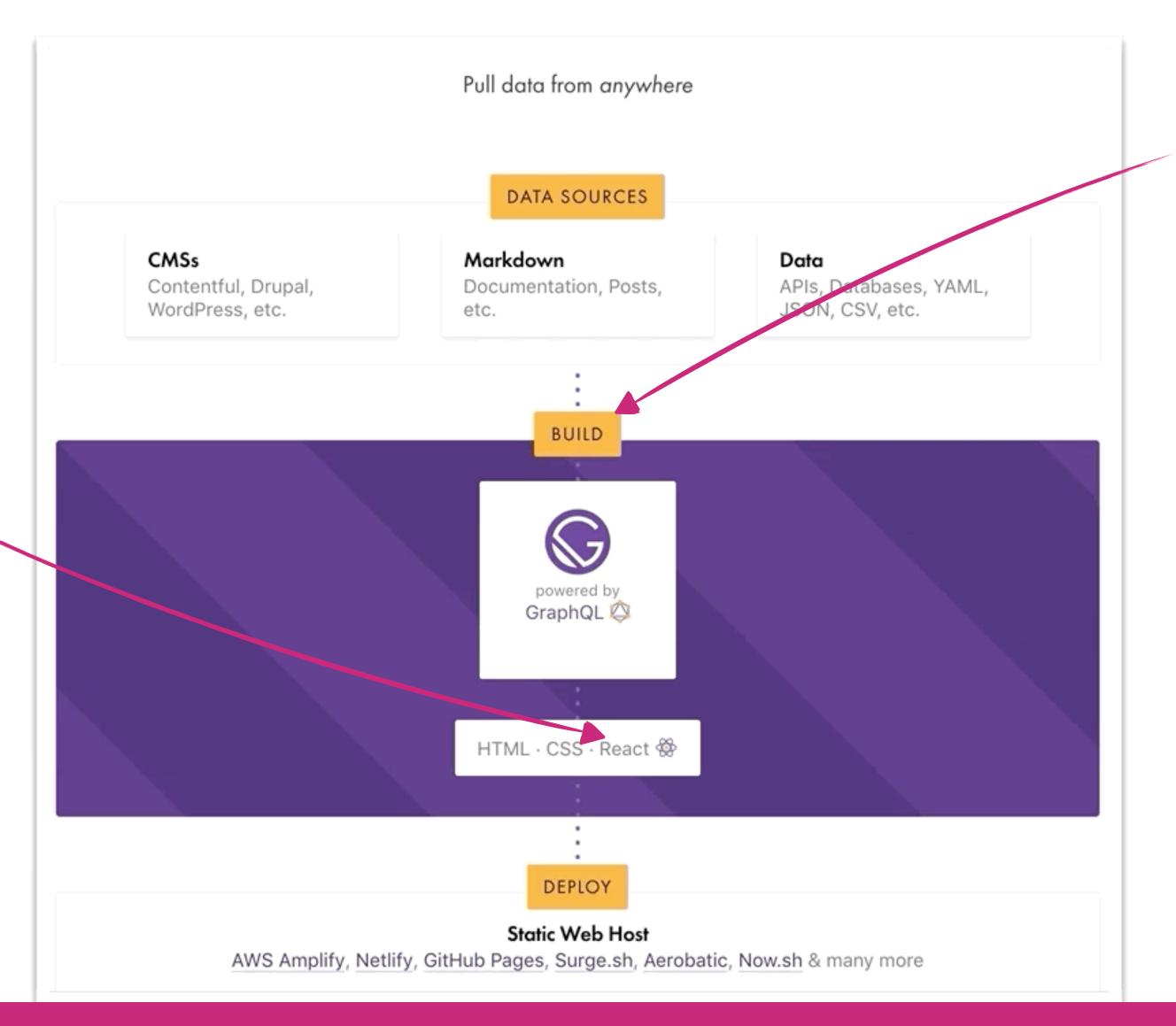
The Average Webpage Is Now the Size of the Original Doom

Source: HTTP Archive

CAN WE RECONCILIATE INTERACTIVENESS OF TODAY WITH PERFORMANCE OF THE 90"?

MEET GATSBYJS

1 You code in React



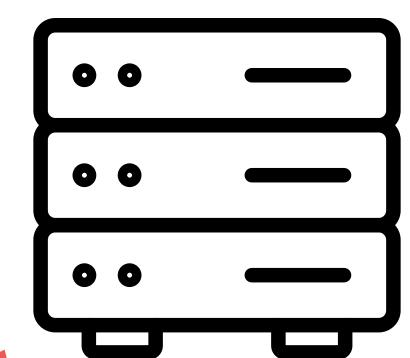
2 Application is compiled to HTML at build time

REQUEST FLOW



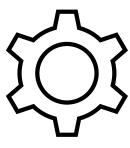
Can I have the homepage please?

yeah, take this HTML file, a snapshot of the page I made during the build

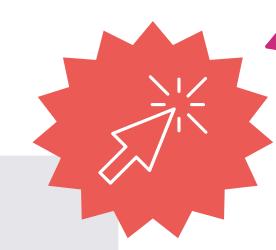


sweet! i can see the content first...

React
environment is
loaded client-side



and now click around!



Following navigation is managed by React

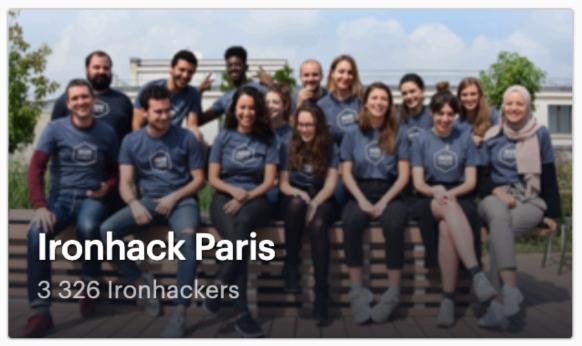
IS GATSBY THAT FAST?



Groupes suggérés

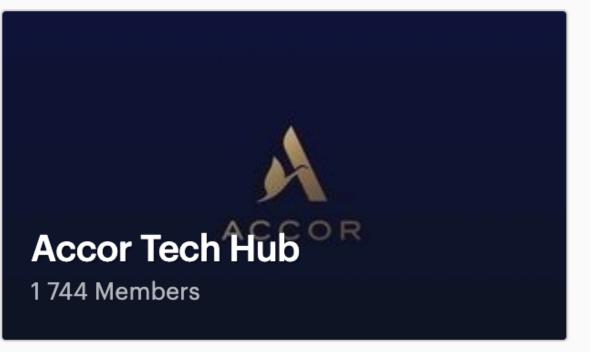


Q

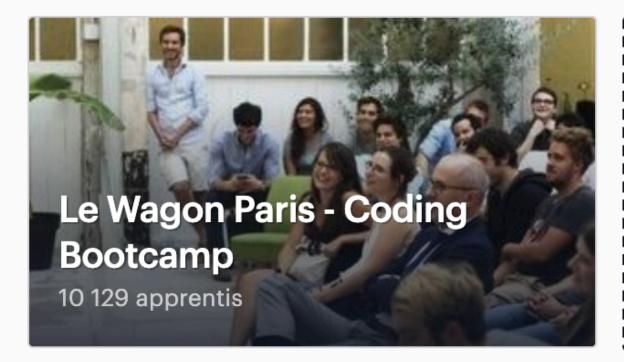






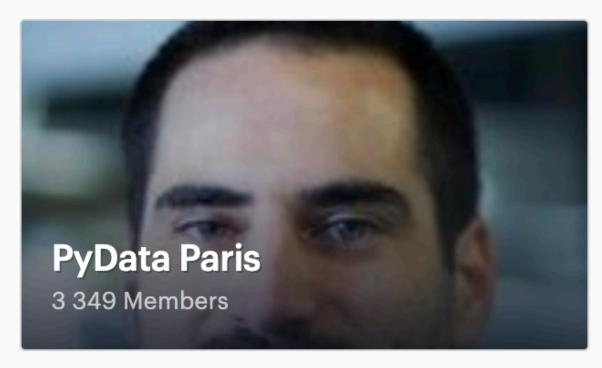






Groupe Meetup JavaScript Paris

Pus de 50 intéressés >



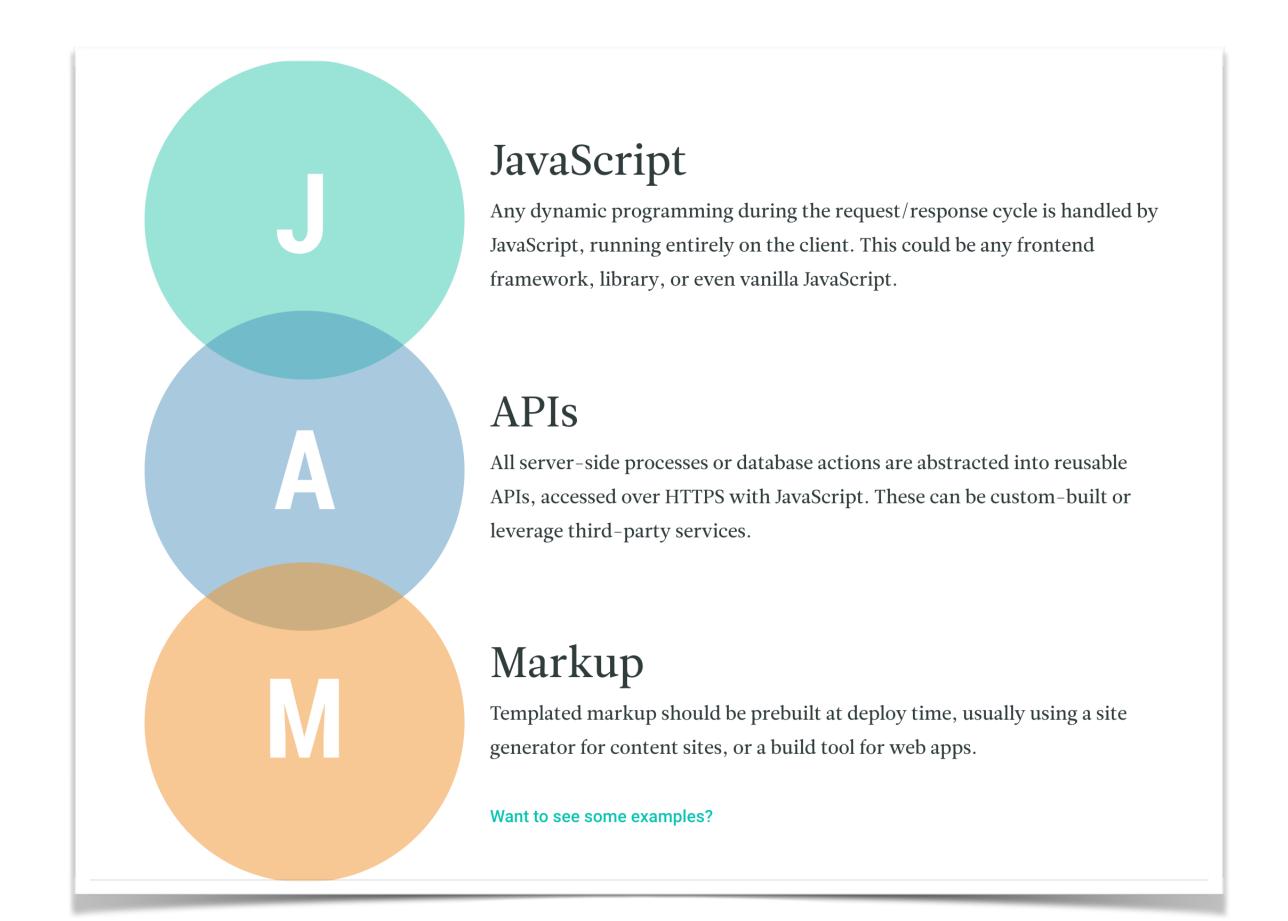




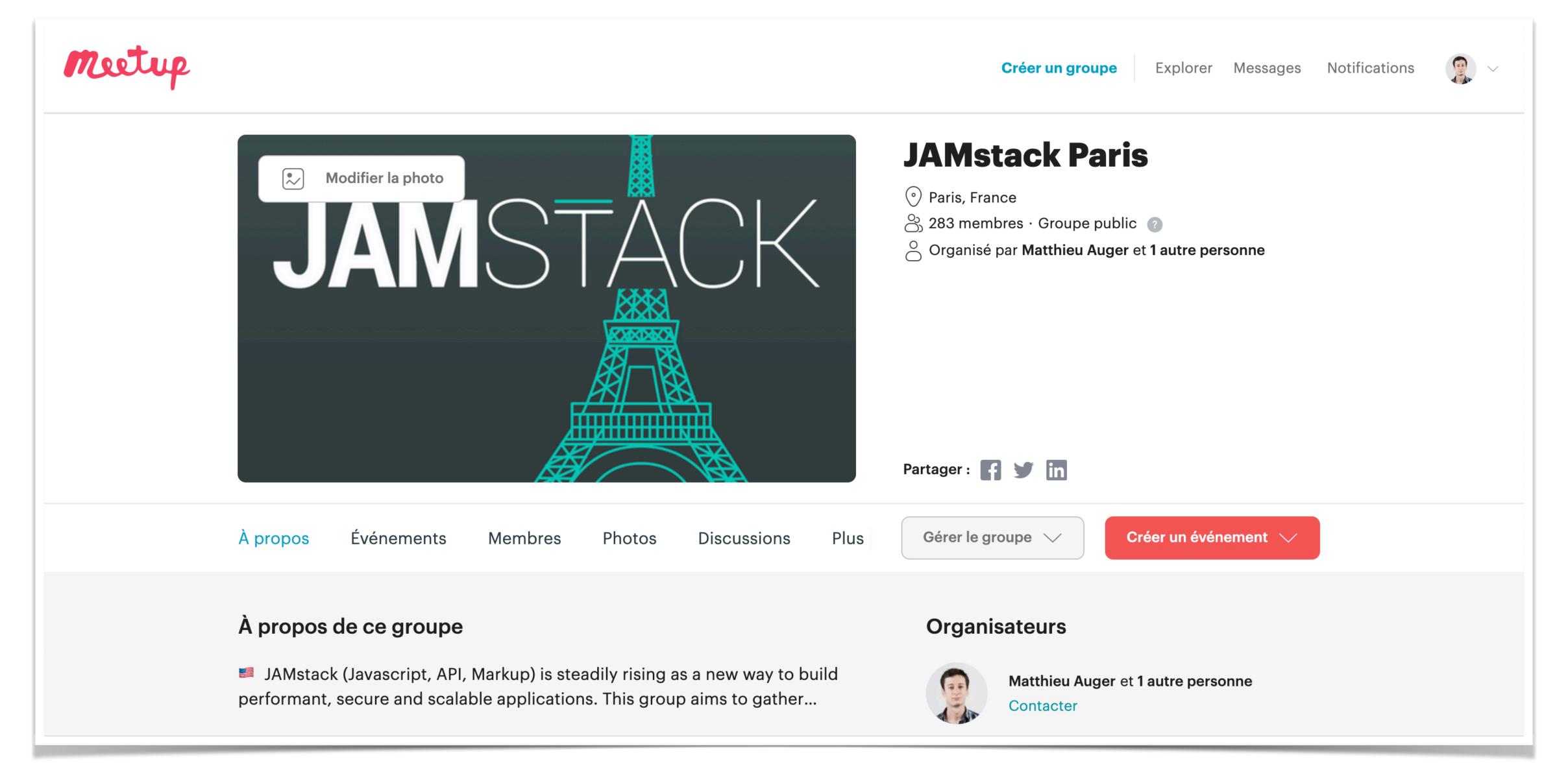


THE JAMSTACK

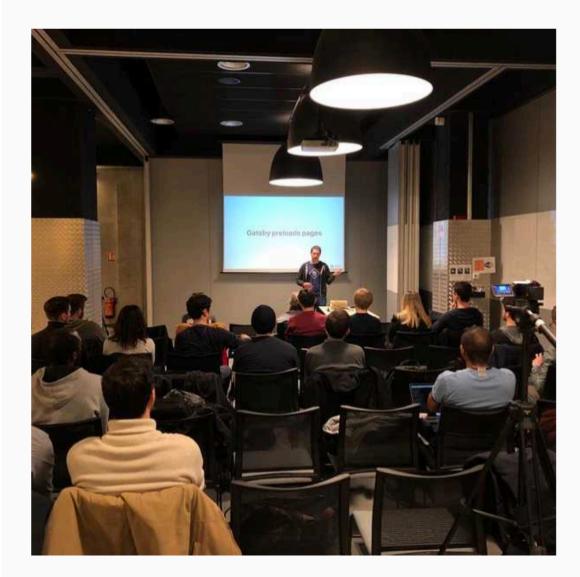
"a modern web development architecture based on client-side JavaScript, reusable APIs, and prebuilt Markup."



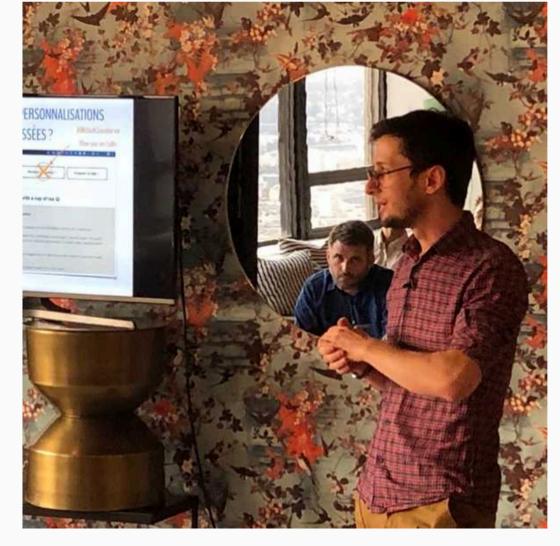
GATHERING JAMSTACK COMMUNITY IN PARIS

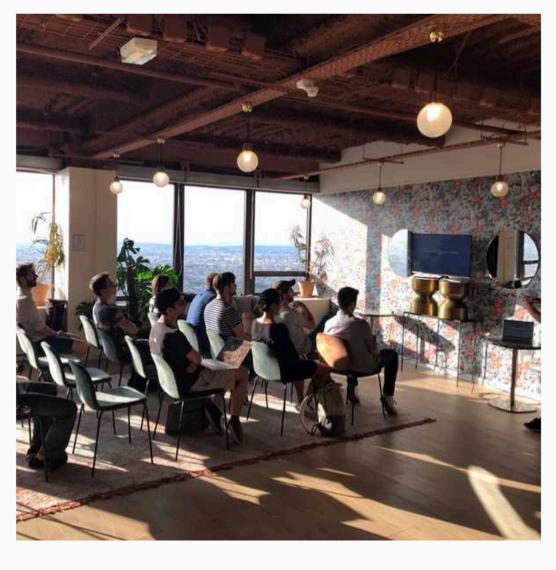


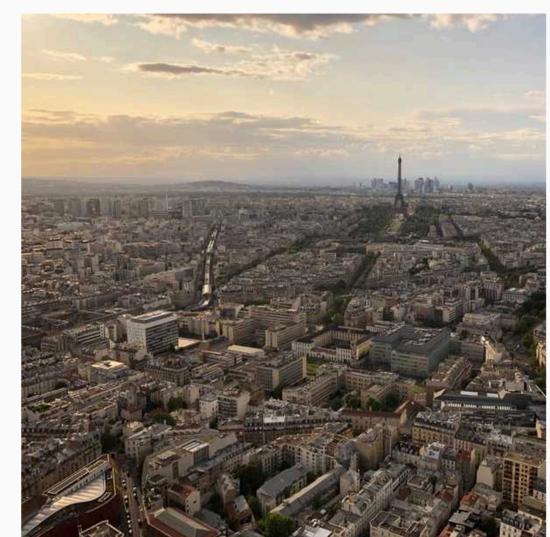
300 MEMBERS, 5 MEETUPS

















WE WANTED A FAST WEBSITE TO COMMUNICATE

Matua

OUR NEEDS

Displays meet-ups from meetup.com API



Performance

JAMstack Paris Meetup

Vidéos →

Photos →

Proposer un talk →

Le meetup bimestriel autour de la JAMstack

Meetup précédents

05/11/2019

Inato

3 Impasse de la Planchette Paris

JAMStack Paris #5

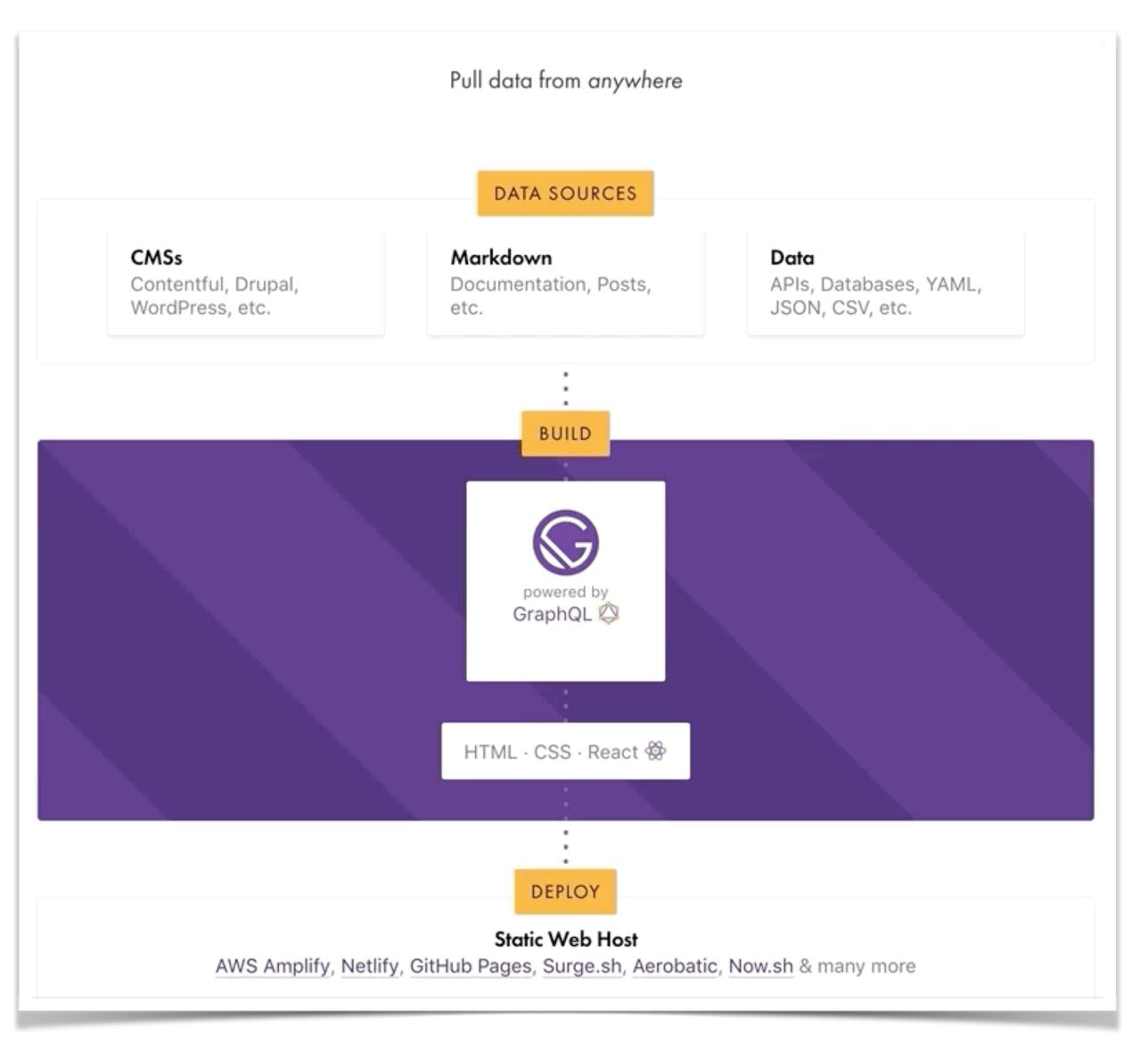
Bonjour à tous,

Après un été radieux qui a laissé place à une douce bruine typiquement parisienne , nous sommes heureux de vous annoncer la cinquième édition du Meetup JAMstack Paris et d'accueillir deux nouveaux speakers :

Arthur Levoyer (https://twitter.com/arthurlevoyer), software engineer chez BAM nous présentera FaunaDB (https://fauna.com/), une base de

17 DISPLAYS MEETUPS FROM MEETUP.COM API

DATA FLOW IN GATSBY SITE



1 Pull Data from sources

2 Query Data with GraphQL

Pass data to React Components

DATA SOURCES Data APIs, Databases, YAML, JSON, CSV, etc. powered by GraphQL 🕸 HTML · CSS · React ∰ DEPLOY Netlify AWS Amplify GitHub Pages Surge.sh Aerobatic ZEIT Now

1 PULL DATA FROM SOURCE WITH SOURCE PLUGINS

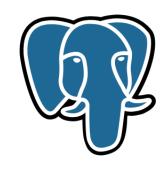


































DATA SOURCES Data APIs, Databases, YAML, JSON, CSV, etc. powered by GraphQL (2) HTML · CSS · React ∰ DEPLOY Netlify AWS Amplify GitHub Pages Surge.sh Aerobatic ZEIT Now

SOURCE PLUGINS ARE NPM PACKAGES

gatsby-config.js

```
module.exports = ({
  plugins: [
      resolve: `gatsby-source-meetup`,
      options: {
        key: process.env.MEETUP_API_KEY,
        groupUrlName: JAMstack-paris,
        status: "upcoming,past",
        desc: "true",
        page: 10
```

DATA SOURCES Data APIs, Databases, YAML, JSON, CSV, etc. BUILD powered by GraphQL 🕸 HTML · CSS · React ∰ DEPLOY Web Hosting Netlify, AWS Amplify, GitHub Pages, Surge.sh, Aerobatic, ZEIT Now & many more

DATA IS FETCHED AND MAPPED AT BUILD TIME

```
→ gatsby-theme-meetup git:(master) yarn workspace jamstack-paris gatsby build yarn workspace v1.19.1

yarn run v1.19.1

$ /Users/matthieu/www/gatsby-theme-meetup/node_modules/.bin/gatsby build success open and validate gatsby-configs - 0.042s
success load plugins - 1.043s
success onPreInit - 0.005s
success delete html and css files from previous builds - 0.009s
success initialize cache - 0.006s
success copy gatsby files - 0.050s
success onPreBootstrap - 0.009s
" source and transform nodes ▼
```

FETCHING DATA ON MEETUP API

DATA SOURCES Data APIs, Databases, YAML, JSON, CSV, etc. BUILD powered by GraphQL HTML · CSS · React ∰ DEPLOY Web Hosting Netlify, AWS Amplify, GitHub Pages, Surge.sh, Aerobatic, ZEIT Now & many more

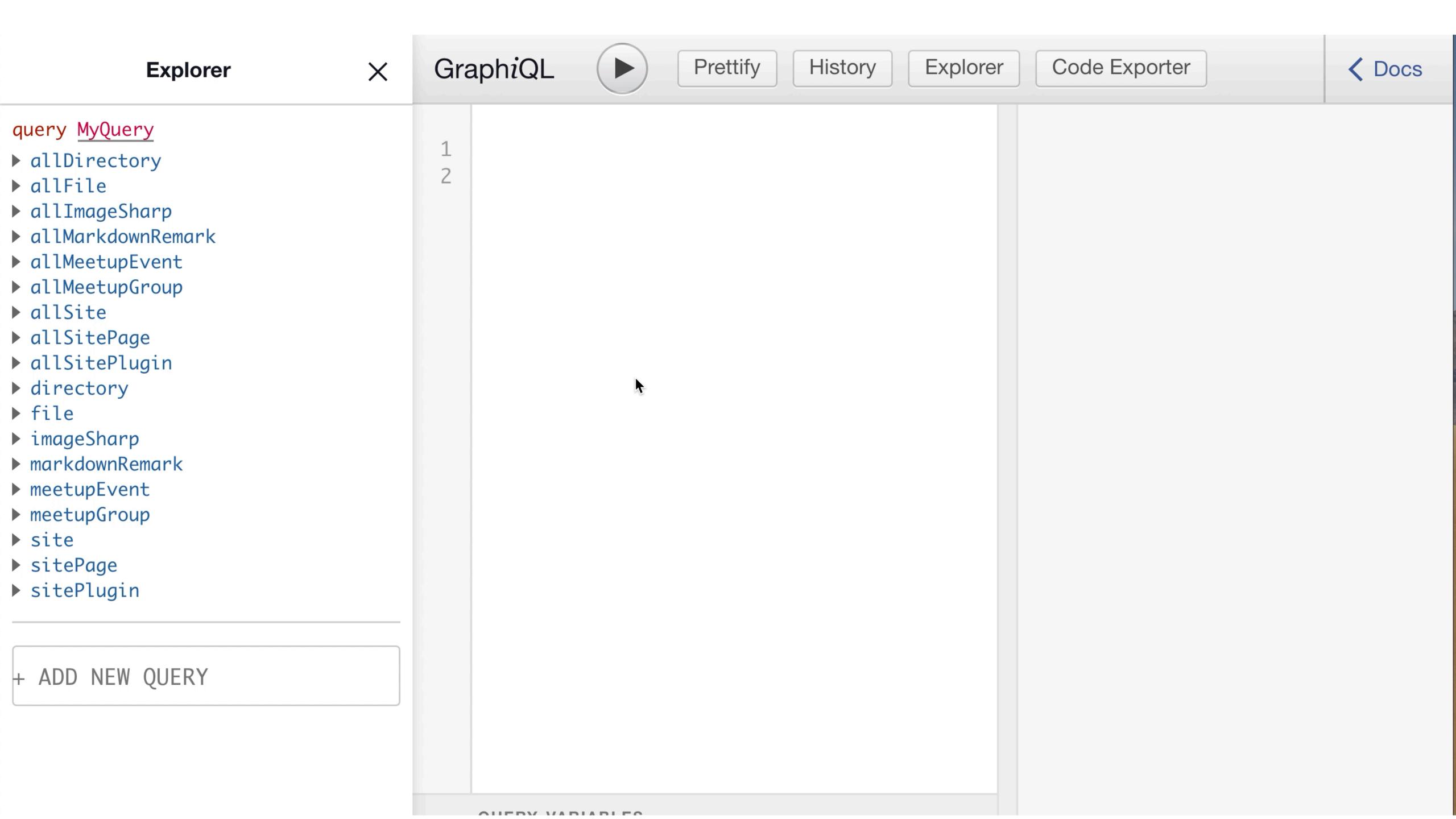
2 QUERY DATA WITH GRAPHQL



Created by Facebook

Request only data you want

Same interface for all your data sources



DATA SOURCES Data APIs, Databases, YAML, JSON, CSV, etc. BUILD powered by GraphQL 🕸 HTML · CSS · React DEPLOY Web Hosting Netlify, AWS Amplify, GitHub Pages, Surge.sh, Aerobatic, ZEIT Now & many more

DATA CAN BE QUERIED IN CODE

Homepage.js

```
const data = useStaticQuery(
  graphql`
    query {
      meetupGroup {
        events {
          id
          name
          description
          local_date
          venue {
            name
            address_1
            city
          link
          status
        name
```

DATA SOURCES Data APIs, Databases, YAML, JSON, CSV, etc. powered by GraphQL (2) HTML · CSS · React DEPLOY Web Hosting Netlify, AWS Amplify, GitHub Pages, Surge.sh, Aerobatic, ZEIT Now & many more

PASS DATA TO REACT COMPONENTS

Homepage.js

ADD A BIT OF STYLING



RUN A BUILD

JAMSTACK.PARIS 1.1





JAMstack Paris Meetup

Vidéos →

Photos →

Proposer un talk →

JAMStack Paris #5

05/11/2019

Inato

3 Impasse de la Planchette Paris

Bonjour à tous,

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Arthur Levoyer (https://twitter.com/arthurlevoyer), software engineer chez BAM nous présentera FaunaDB (https://fauna.com/), une base de données cloud serverless qu'il a utilisé pour l'un de ses side project JAMstack.

CHECKLIST WHEN WORKING WITH DATA

Look for, install and configure related source plugin

2 Get your GraphQL right with GraphiQL

Inject it to your React components 💉





PICTURE GALLERY



JAMstack Paris Meetup

Vidéos →

Photos →

Proposer un talk →



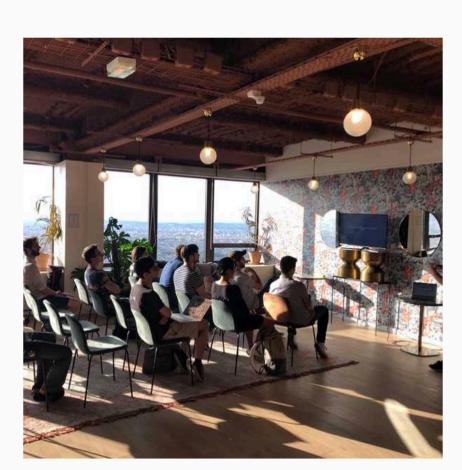


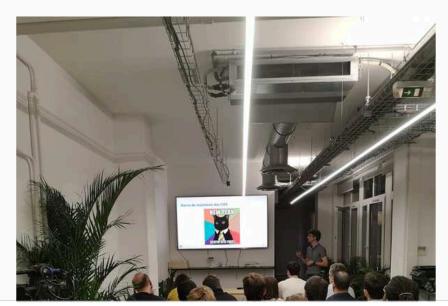












IMAGES ARE HARD TO GET RIGHT

How to serve high quality images to high resolution devices?

How to optimise image size of small devices?

How not to wait for full download of images before

rendering the pages?

IN GATSBY IMAGES ARE DATA LIKE OTHERS

Install and configure related source plugin

Official Plugin

View plugin on GitHub

See starters using this

gatsby-config.js

gatsby-source-filesystem

A Gatsby source plugin for sourcing data into your Gatsby application from your local filesystem.

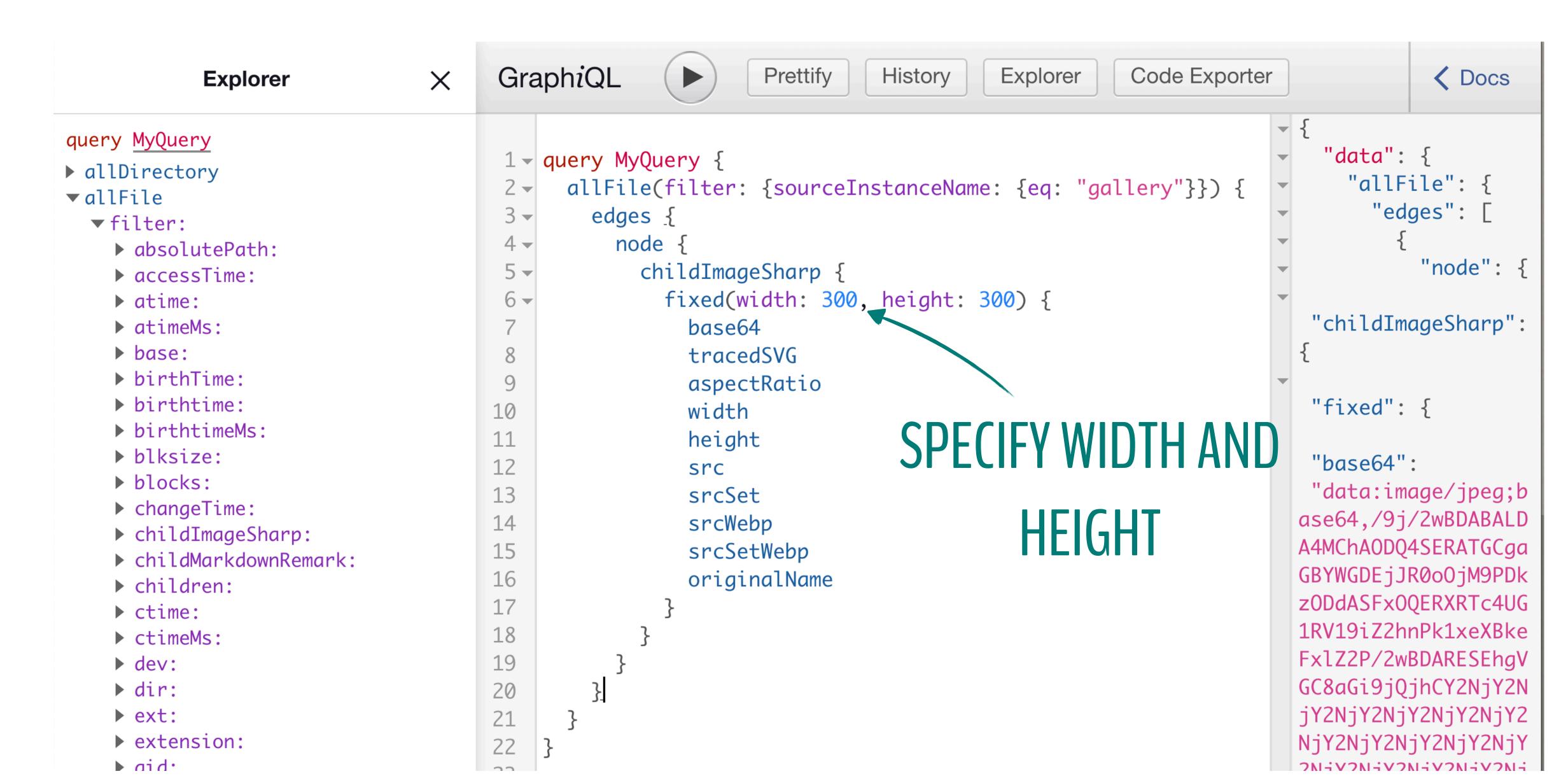
The plugin creates File nodes from files. The various "transformer" plugins can transform File nodes into various other types of data e.g. gatsby-transformer-json transforms JSON files into JSON data nodes and gatsby-transformer-remark transforms markdown files into MarkdownRemark nodes from which you can query an HTML representation of the markdown.

Install

npm install --save gatsby-source-filesystem

```
module.exports = {
   plugins: [
        resolve: `gatsby-source-filesystem`,
        options: {
        name: `gallery`,
        path: `${__dirname}/src/images/gallery`
      }
    }
   }
};
```

2 Get your GraphQL right with GraphiQL



2 Get your GraphQL right with GraphiQL

GENERATES HIGH-

```
<picture><source</pre>
                                                                                RES VERSIONS
    srcset="
     /static/762d4c85dbed42f294dd8870c0200bc6/792e8/meetup-lbc-haroen.jpg 1x,
      /static/762d4c85dbed42f294dd8870c0200bc6/c3f37/meetup-lbc-haroen.jpg 1.5x,
      /static/762d4c85dbed42f294dd8870c0200bc6/1eaf9/meetup-lbc-haroen.jpg 2x
 <img
    srcset="
     /static/762d4c85dbed42f294dd8870c0200bc6/792e8/meetup-lbc-haroen.jpg 1x4
      /static/762d4c85dbed42f294dd8870c0200bc6/c3f37/meetup-lbc-haroen.jpg 1.5x,
      /static/762d4c85dbed42f294dd8870c0200bc6/1eaf9/meetup-lbc-haroen.jpg 2x
    src="/static/762d4c85dbed42f294dd8870c0200bc6/792e8/meetup-lbc-haroen.jpg"
    alt="JAMstack Paris Gallery Picture"
   width="300"
    height="300"
    loading="lazy"
    style="position: absolute; top: 0px; left: 0px; width: 100%; height: 100%; object-
fit: cover; object-position: center center; opacity: 1; transition: opacity 500ms ease 0s;"
/></picture>
```

IMAGES WERE HARD TO GET RIGHT





How not to wait for full download of images before

rendering the pages?





JAMstack Paris Meetup

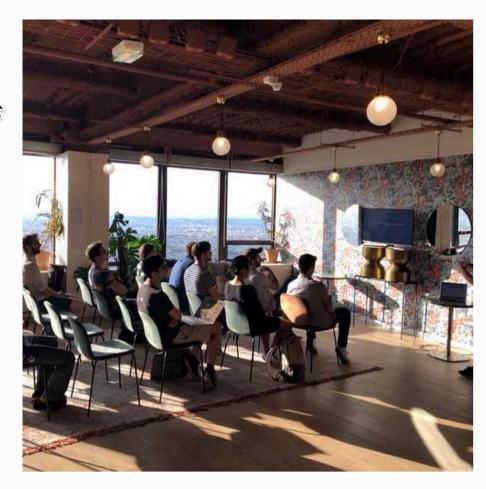
Vidéos →

Photos →

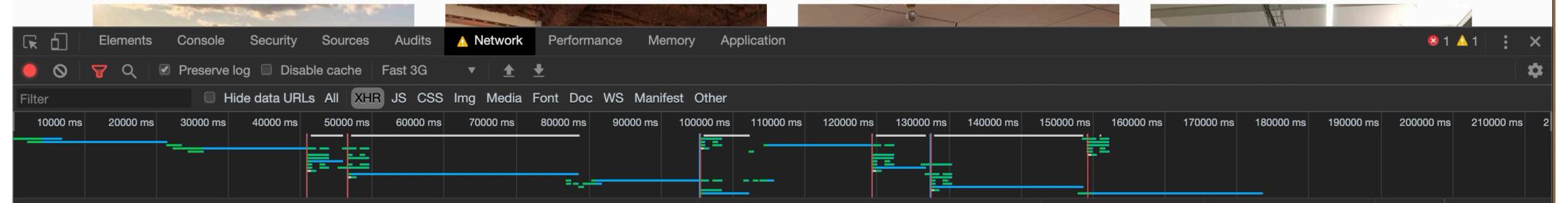
Proposer un talk →



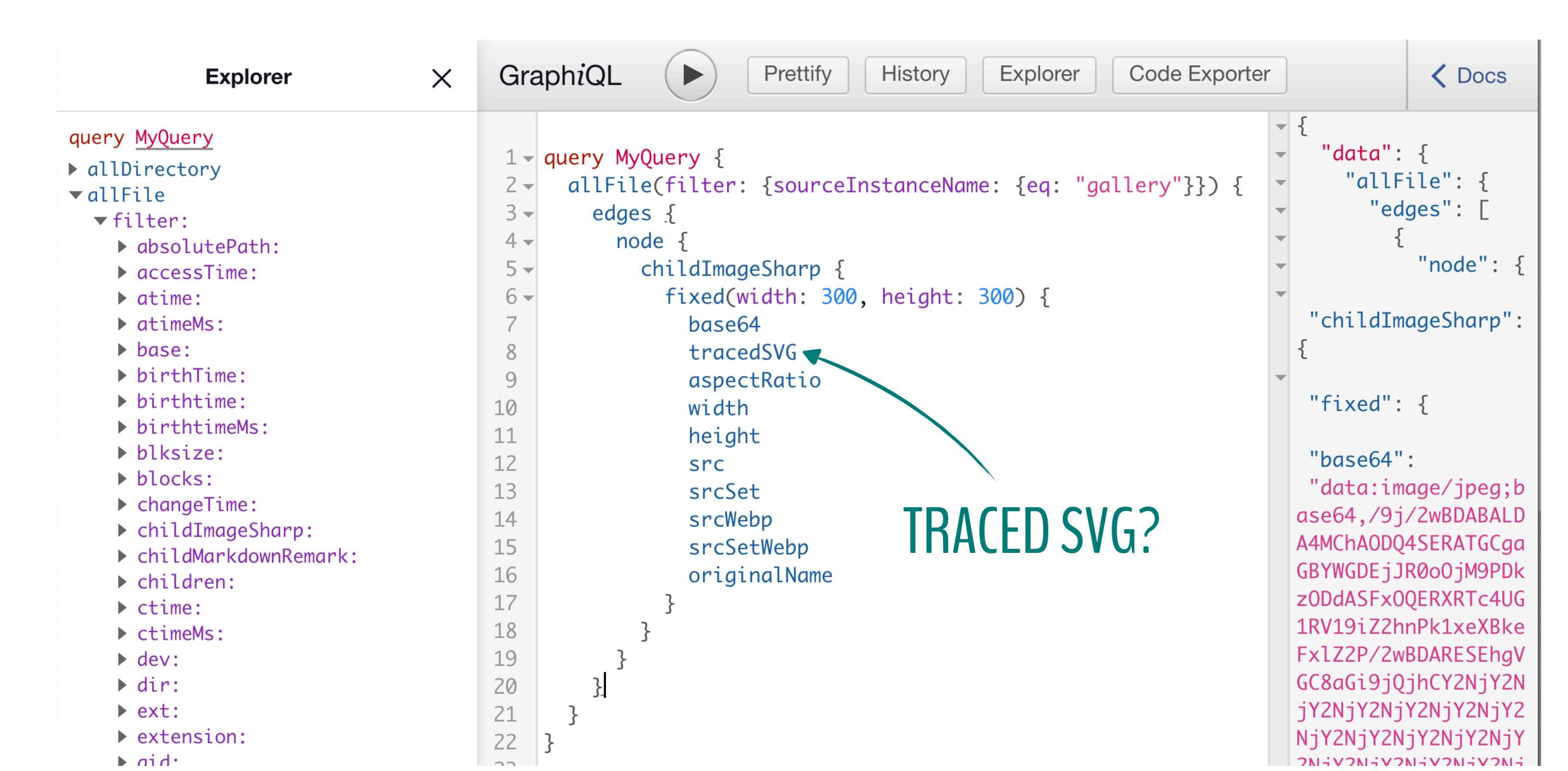








2 Get your GraphQL right with GraphiQL





SMOOTH TRANSITION



JAMstack Paris Meetup

Vidéos →

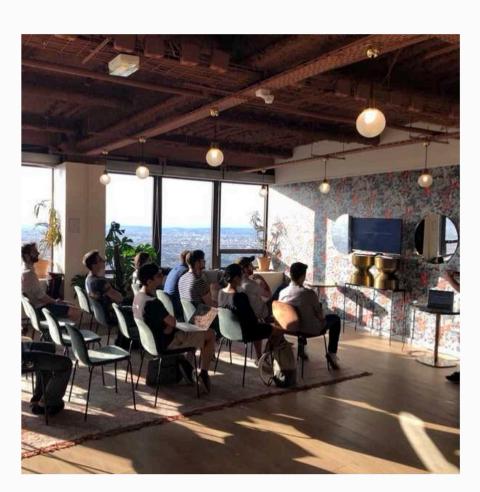
Photos →

Proposer un talk →

















PERFORMANCE

FAST, BY DEFAULT

"I designed Gatsby with the goal that when using it, it'd be really hard to build a slow site"

- Kyle Matthews, GatsbyJS creator

ROUTE BASED CODE SPLITTING

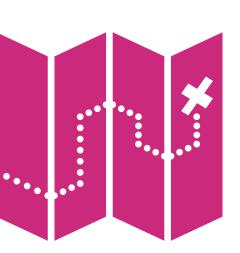
Goal of code splitting: only bring to the user what he

needs, when he needs it. We will split our Javascript in

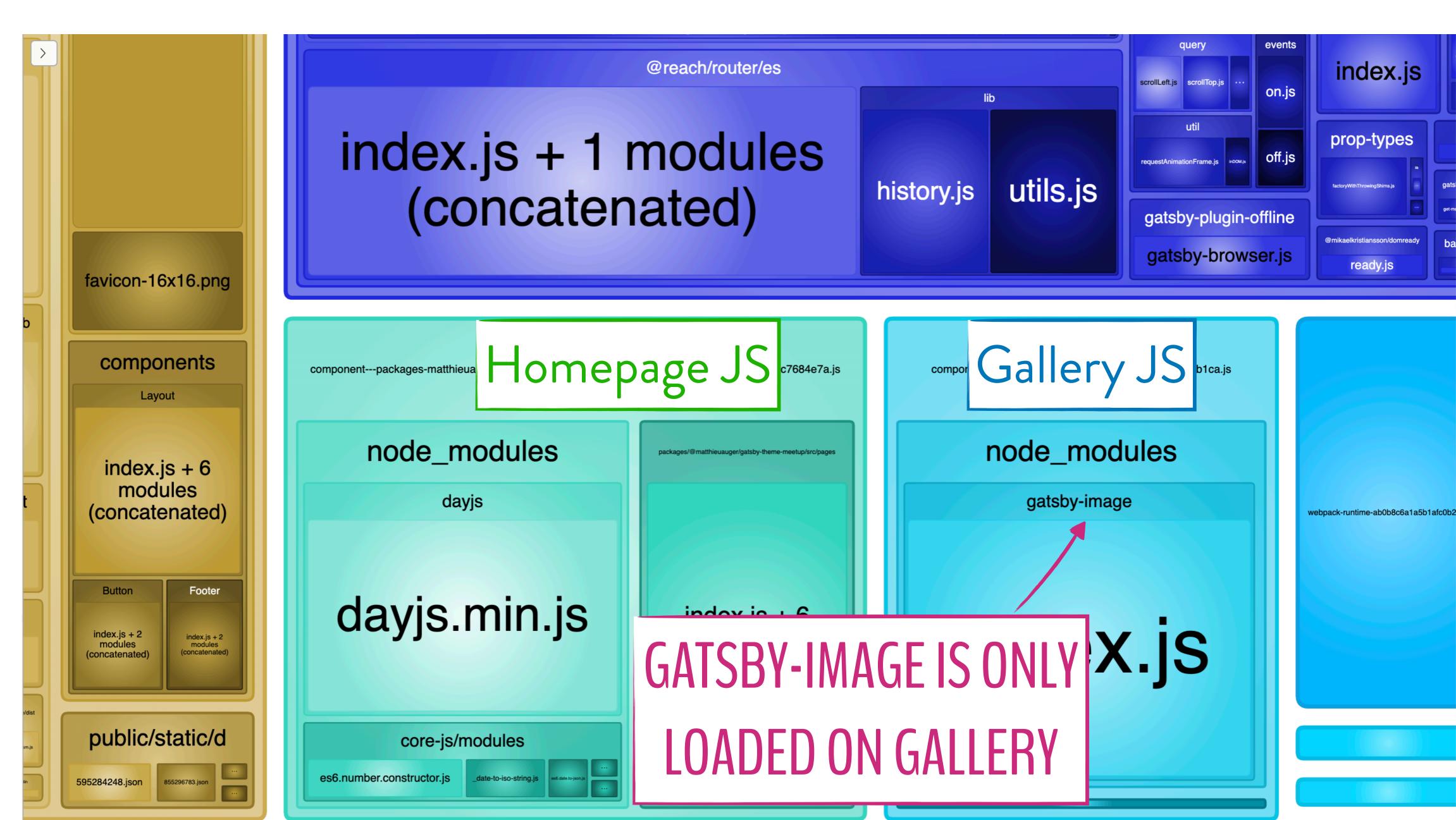
multiple chunks and when the user makes an action, he

will only receive the related Javascript

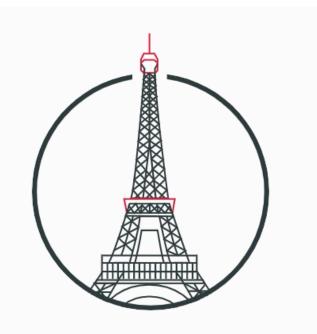
MANUAL CODE SPLITTING IS HARD WITH WEBPACK



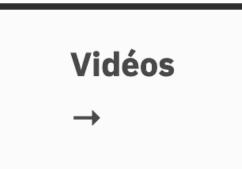
GATSBY AUTOMATICALLY SPLITS YOUR CODE BY PAGE



SUBPAGES ARE PREFETCHED ON LINK HOVER



JAMstack Paris Meetup





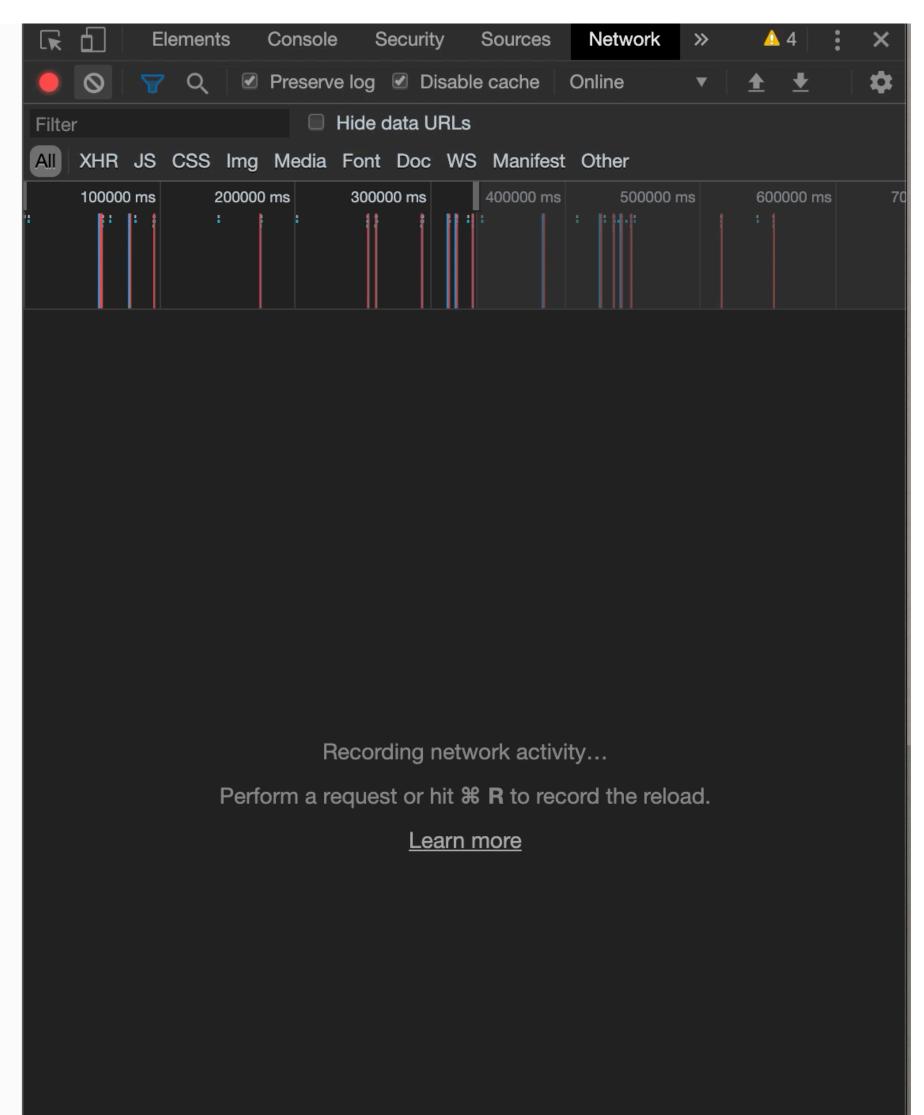
Le meetup bimestriel autour de la JAMstack

Qu'est-ce que la JAMstack?

C'est du Javascript, des APIs, et du Markup.

Un mélange détonnant entre les sites statiques "à l'ancienne" et les technos récentes comme React et GraphQL qui permet de concevoir des sites super rapides, super rapidement.

La JAMstack s'appuie sur des technos comme Gatsby, Contentful, Netlify et bien d'autres, et fait tourner des sites de tous types et de toutes tailles :



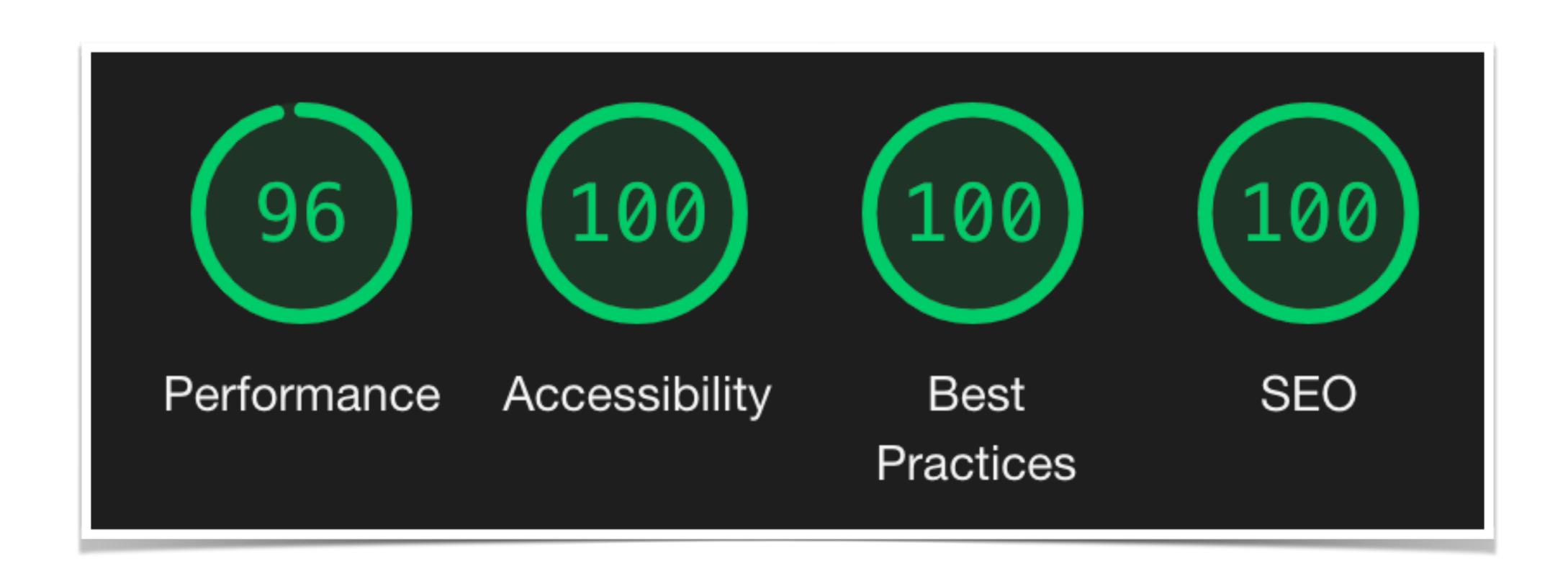
OTHER BUILT-IN OPTIMIZATIONS

Native Lazy Loading

Inline Critical CSS

2 HTTP2

IMO GATSBY DOES FULFILL ITS PROMISES



GATSBY LIMITS 3

BUILD TIME IS CORRELATED TO CONTENT SIZE

"builds are slow (about 1.5-2 times slower than my PC) and [...] 15 minutes is sometimes easy to reach"

ERRORS MAY BE MYSTERIOUS

```
nfo bootstrap finished - 1.536 s
error There was an error compiling the html.js component for the development server.
See our docs page on debugging HTML builds for help https://goo.gl/yL91ND
           if (args.length > 8) {
             // Check before the condition to catch violations early.
             throw new Error('warningWithoutStack() currently supports at most 8 arguments.');
  92
  93 |
           if (condition) {
  94 |
  WebpackError:
  - react-dom-server.node.development.js?5336:91 Parser.pp$4.raise
    ~/react-dom/cjs/react-dom-server.node.development.js?5336:91:1
  react.development.js?1871:438 Parser.pp.unexpected
    ~/react/cjs/react.development.js?1871:438:1
    react.development.js?1871:432 Parser.pp.expect
    ~/react/cjs/react.development.js?1871:432:1
    index.js?2927:76 Parser.pp$3.parseObj
    ~/object-assign/index.js?2927:76:1
```

SUM-UP

- Really good experience
- Documentation is great
- Community is positive and helpful
- The hybrid approach of static and dynamic

Still look for a professional project to use Gatsby with

IF YOU WANT TO BEGIN WITH GATSBY



https://www.gatsbyjs.org/docs/

https://egghead.io/browse/frameworks/gatsby

https://github.com/gatsbyjs/gatsby



BEFORE LEAVING, A QUICK TASTE OF GATSBY THEMES

"share design, components and set of

plugins easily still allowing

configuration and overriding"



Gatsby Theme Meetup



Launch your meetup website in minutes 🚀











