

Disassembling the Monolith

taming large software projects with

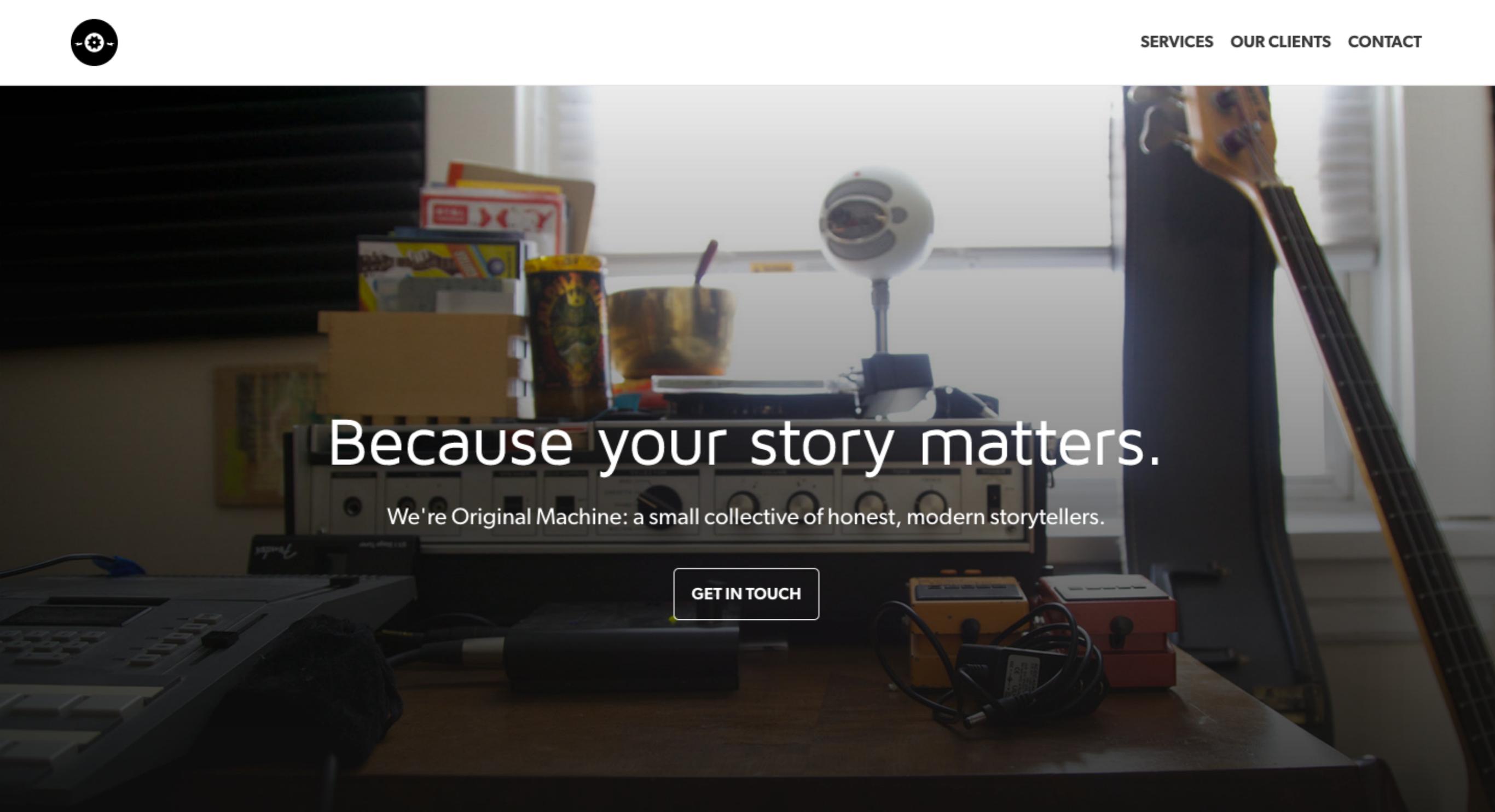


Who is this guy?



@nicholaswyoung

radio host
designer
photographer
ex-software developer
extraordinarily busy person



Because your story matters.

We're Original Machine: a small collective of honest, modern storytellers.

GET IN TOUCH

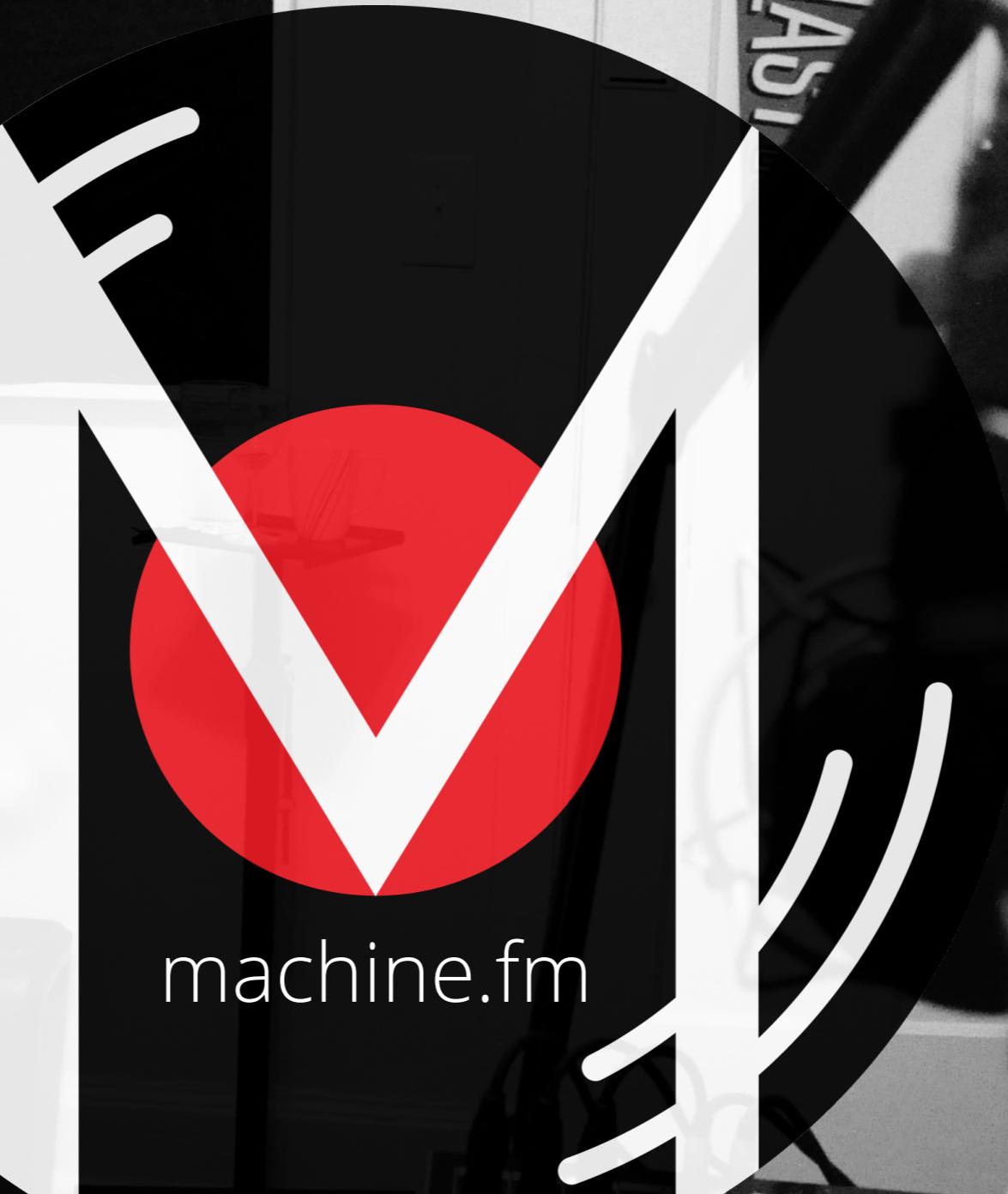
originalmachine.com



radio programs

I make
compelling,
educational

(think of us as a
slightly edgier
NPR)



machine.fm

I love getting things
DONE

tinkering is
useless

unless it teaches us something



my passion isn't
writing code
(I lost that years ago.)

my passion isn't
writing code
for the sake of
writing code

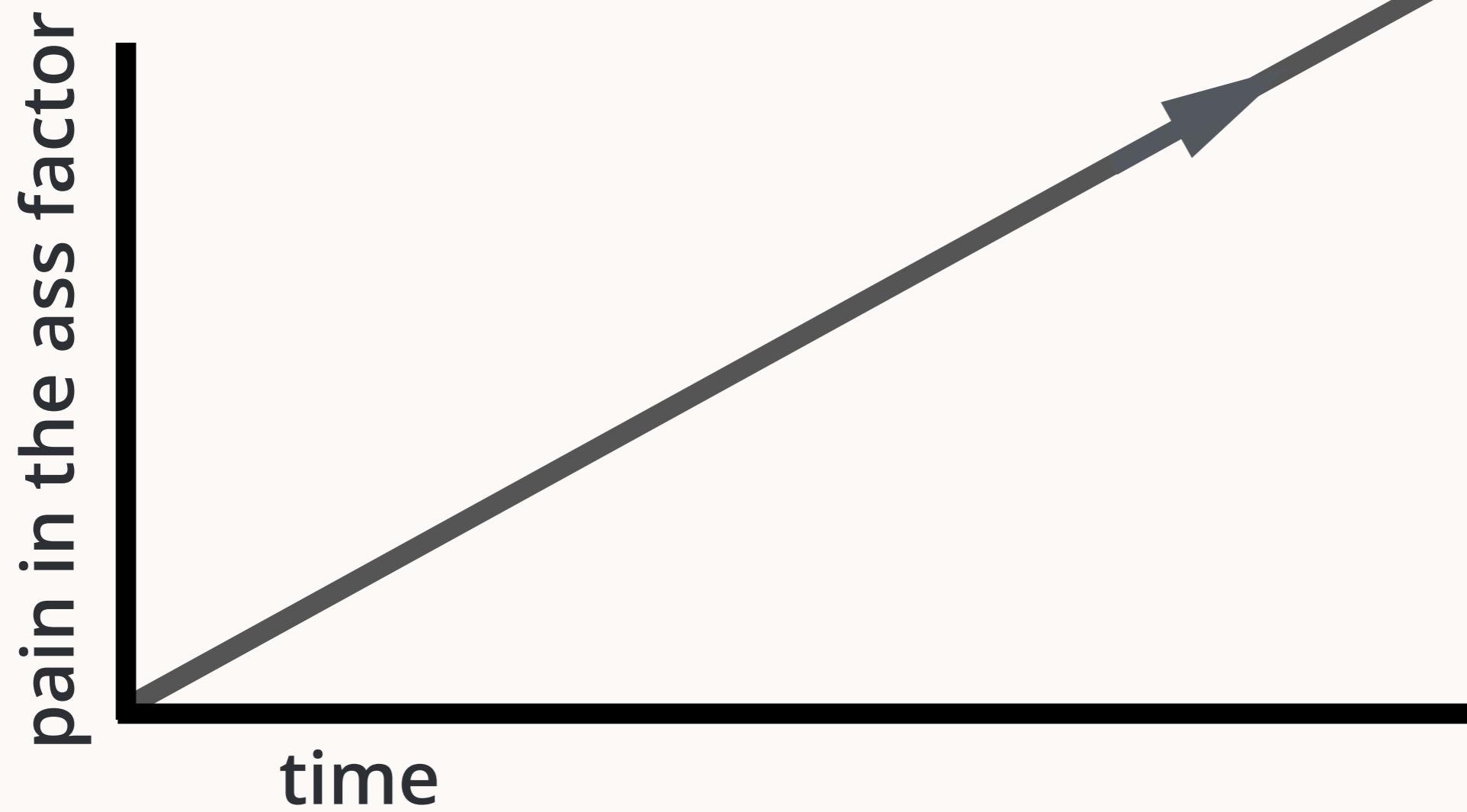
I promise to show you some clever
javascript
before we're done here

“scalability”

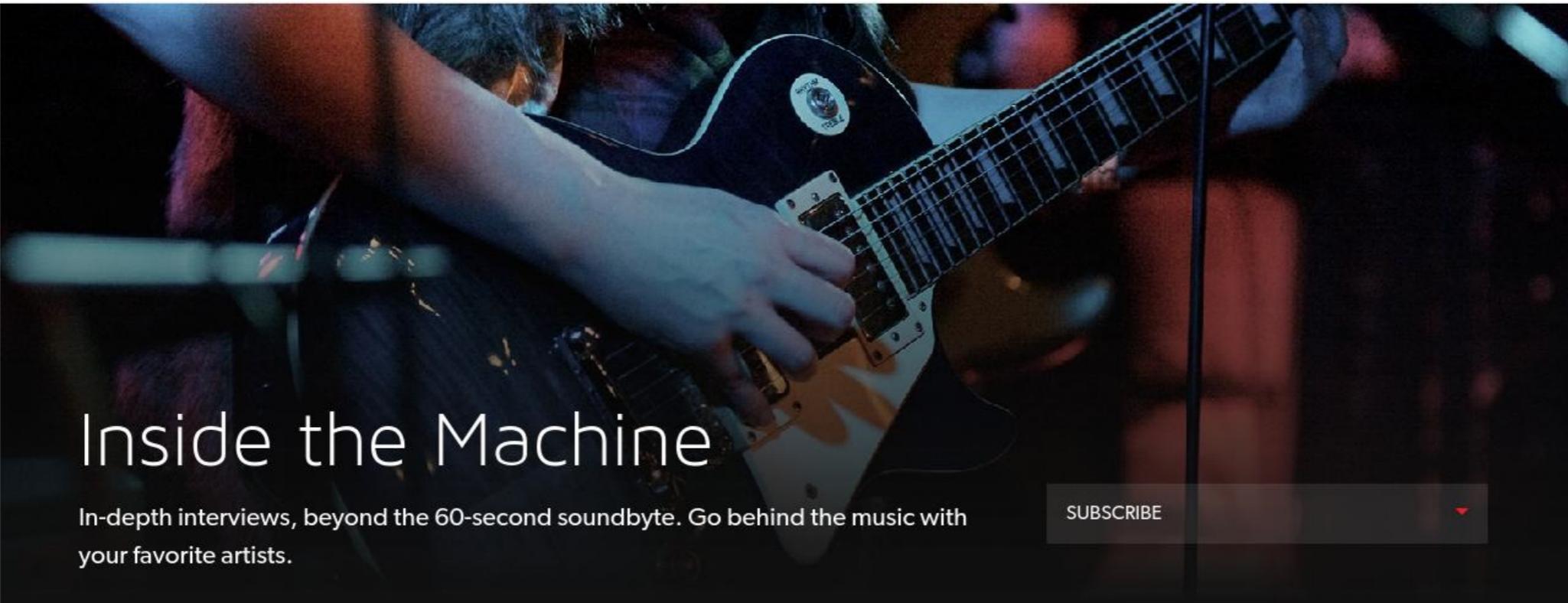
“scalability”

“Scalability is the ability of a system, network, or process to handle a growing amount of work in a capable manner or its ability to be enlarged to accommodate that growth.” - Wikipedia

“scalability”



**the year of
explosions**



Inside the Machine

In-depth interviews, beyond the 60-second soundbyte. Go behind the music with your favorite artists.

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RECENT EPISODES

[Spaces of Disappearance](#)

Here in Chicago, our local music scene is anything but normal. It welcomes those who are bent on reckless experimentation; some aiming for greatness, and others for the total deconstruction of their art form. Today, though, I bring you a band from the former category: Spaces of Disappearance, a colorful (and relatively new) act that is, if possible, expanding what you'll recognize as electronica.

[Lore City](#)

From the asphalt kingdom, to the quiet countryside of upstate New York, Lore City is always on the move; leaving ethereal, potent soundscapes in their wake. Hear their entire story, and preview their new album *Kill Your Dreams*, today on Inside the Machine.

[Voluts](#)

Inspired by the basics of life, Voluts' new release, *Elegant Grey*, is an excursion away from the established roads of electronic music. It's 30 minutes of bombastic percussion married with light orchestral flourishes, and not to be missed. Hear the story behind Christina's music today on Inside the Machine.

[The Wild Finish](#)

Turn it up! This week's episode is full of loud, rambunctious tracks from Chicago alt-rock band The Wild Finish. What began as an experiment, has flourished into a long-running project with dedicated fans, spread all across the midwest. This band is on the rise, and they don't plan on stopping anytime soon.

[Savage Sister](#)

Today, Inside the Machine presents fresh sounds from America's heartland. While Chicago may not be known as the shoegaze capital, Savage Sister has staked their claim and is inspiring audiences across the midwest with their signature blend of shoegaze. What's shoegaze, you ask? Press play to find out.

HOST

Nicholas Young

Nicholas Young is an educator, producer, mastering engineer, photographer, broadcaster, and entrepreneur. With more than a decade of expertise spanning almost every creative discipline, no industry is safe from his disruptive, innovative spirit.



Thanks for his early adoption of podcasting, and various guest appearances on the terrestrial radio dial, Nicholas' voice has been heard by...

[Read more »](#)

<https://feeds.machine.fm/><https://feeds.machine.fm/nexus>

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        How can we demolish the wall of animosity between traditional churches and the LGBTQ community? Our guest, Jay Bakker, has a few ideas. Jay is the son of the popular televangelism couple Jim and Tammy Faye Bakker. After he stopped believing homosexuality is a sin, his ministry lost all its funding. Jay, undeterred, went on to become an outspoken straight ally. Hear his story - one of grace and rebellion, in equal measure - today on the debut episode of The Nexus.
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        <p>On the premier episode of The Nexus, hosts <a href="http://savejudy.com">Randy Eddy-McCain</a> and <a href="http://facebook.com/neall1">Neal Campbell</a> interview Jay Bakker.</p>
        <p><a href="http://jaybakker.com">Jay Bakker</a> is an author, popular speaker, pastor, straight ally with the LGBTQ community. He's also the son of infamous televangelists, Jim and Tammy Faye Bakker.</p>
        <p>Several years ago, when Jay was beginning to wonder if the church might be wrong about LGBTQ people, Randy invited him to come speak at the <a href="http://www.sherwoodopendoor.org/">Open Door Community Church</a> Fall Conference. The experience of being in a Christian community filled with undeniable love and grace help Jay make up his mind for good.</p>
        <p>When he went back home to Atlanta, he announced to his congregation that he no longer could believe that homosexuality is a sin. His ministry lost its funding and Jay began to struggle, but he never backed down. He became a stronger voice to tear down the wall that Christians have erected to keep people in the LGBTQ community away from Jesus.</p>
        <p>We talk to Jay about the initial backlash against his stance and how much has changed since he came out as a Christian straight Ally to the LGBTQ community. Things have changed so fast in just a few years that people now accuse Jay of supporting gay rights to be popular. Having walked through the fire of massive rejection by Christians, Jay talked about how indicative that accusation is that we've come a very long way.</p>
        <p>We talked with Jay about his latest book, <em><a href="http://www.amazon.com/Faith-Doubt-Other-Lines-Crossed-ebook/dp/B007ZFP04U/bacontv-20">Faith, Doubt, and other Lines I've Crossed</a></em>, and about how more and more people who grew up firmly believing in the message of Christianity are beginning to doubt that it's true.</p>
        <p>We also talked about his famous parents, Jim and Tammy Faye, the pain of losing Tammy Faye to cancer, the awkwardness of disagreement on social media, and our changing thoughts about what grace is all about.</p>
        <p>If you like the first episode, we'd appreciate it if you'd buy Randy Eddy-McCain's autobiography, <em><a href="http://savejudy.com">And God Save Judy Garland</a></em>. It's funny at times, heartbreaking at times, but ultimately it's a victorious and beautiful love story.</p>
        <p><strong>Support the show</strong></p>
        <ul>
          <li>Get <em>And God Save Judy Garland</em> <a href="http://www.amazon.com/And-God-Save-Judy-Garland/dp/0990473104/bacontv-20">Paperback</a>.</li>
          <li>Get Jay's book <em><a href="http://www.amazon.com/Faith-Doubt-Other-Lines-Crossed-ebook/dp/B007ZFP04U/bacontv-20">Faith, Doubt, and other Lines I've Crossed</a></em>.</li>
          <li>Get our theme song, <em><a href="http://www.amazon.com/Thats-Not-What-I-Meant/dp/B00EUXRIGM/BaconTV-20">That's Not What I Meant</a></em> by <a href="http://www.youtube.com/watch?v=JyfXzrWVQHw">JyfXzrWVQHw</a>.</li>
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Dispatch 48 is out now. This week, the best from #WWDC, and a new music system for small businesses, @MixdownCo: machine.fm/dispatch/48

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The Machine

Dispatch - Mixdown -6:52

Mixdown | Dispatch

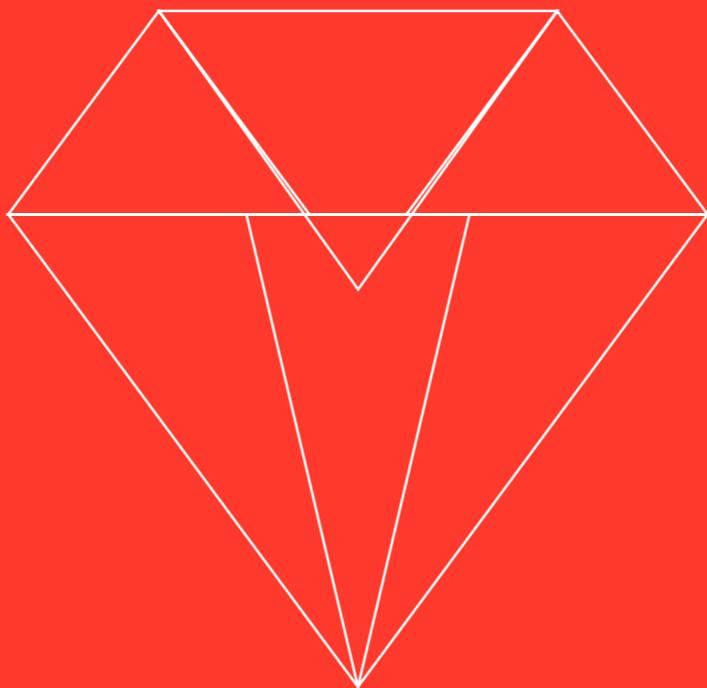
Let's talk about WWDC. Do you care about anything that Apple announced? Nicholas certainly does. Then, Joshua turns the table and interviews his co-host about an upcoming product, Mixdown, that aims...

[View on web](#)

RETWEET 1 FAVORITES 2

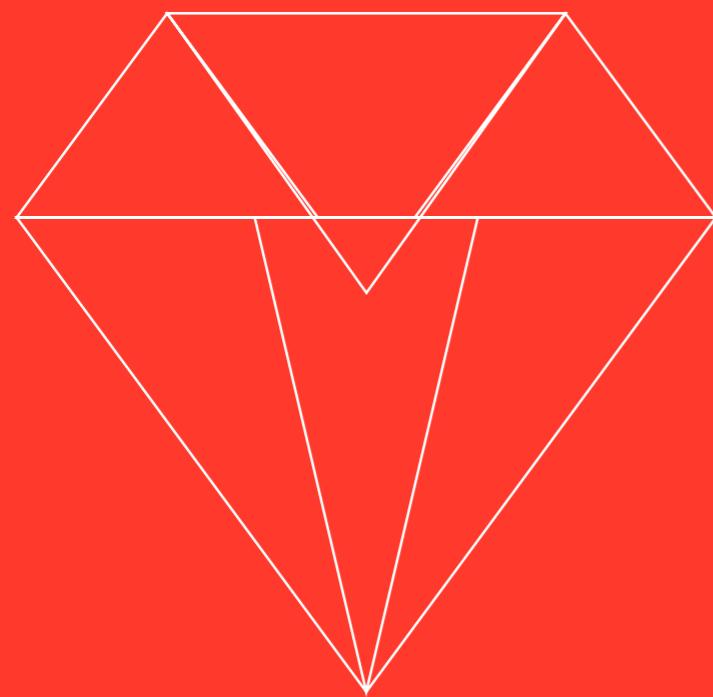
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Reply to @MachineFM @MixdownCo



Ruby

a programmer's best friend

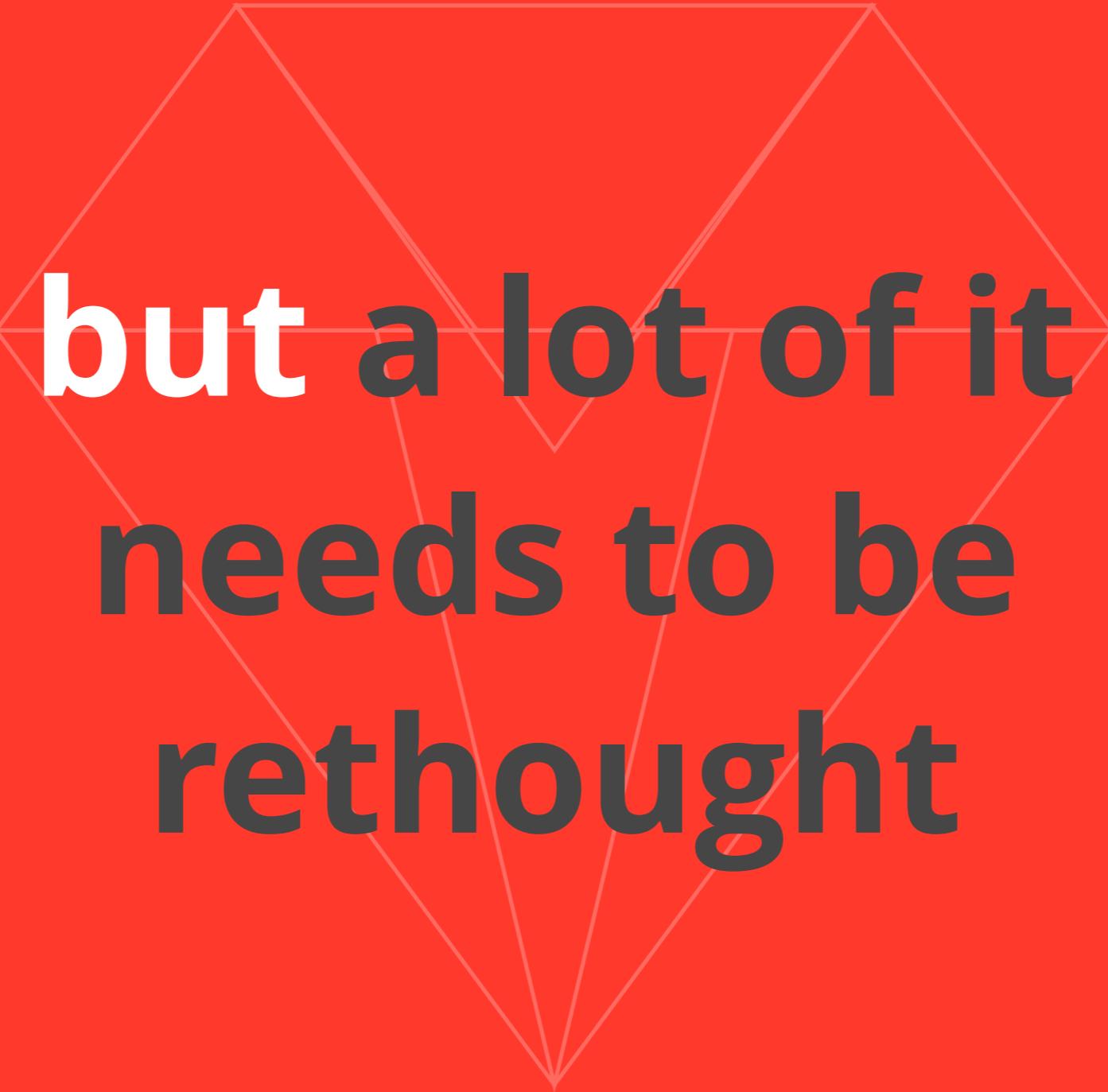


~~slow runtime~~
~~poor threading support~~
concurrent long running tasks



not knockin' it

ruby is still awesome, in a lot
of ways



**but a lot of it
needs to be
rethought**

file upload



server processing



store processed files in the cloud

file upload

everyone does this

server processing

your thread is

waiting

store processed files in the cloud

A photograph of Earth at night, showing the illuminated city lights of North America and South America against the dark oceans and continents.

**while everything
happens, your user
thinks the app is
doing nothing**



**with several users
submitting large file
uploads, our app
grinds to a halt**

* only on one thread, sure, but that's still bad.



why?

because I built a monolith:

public facing website

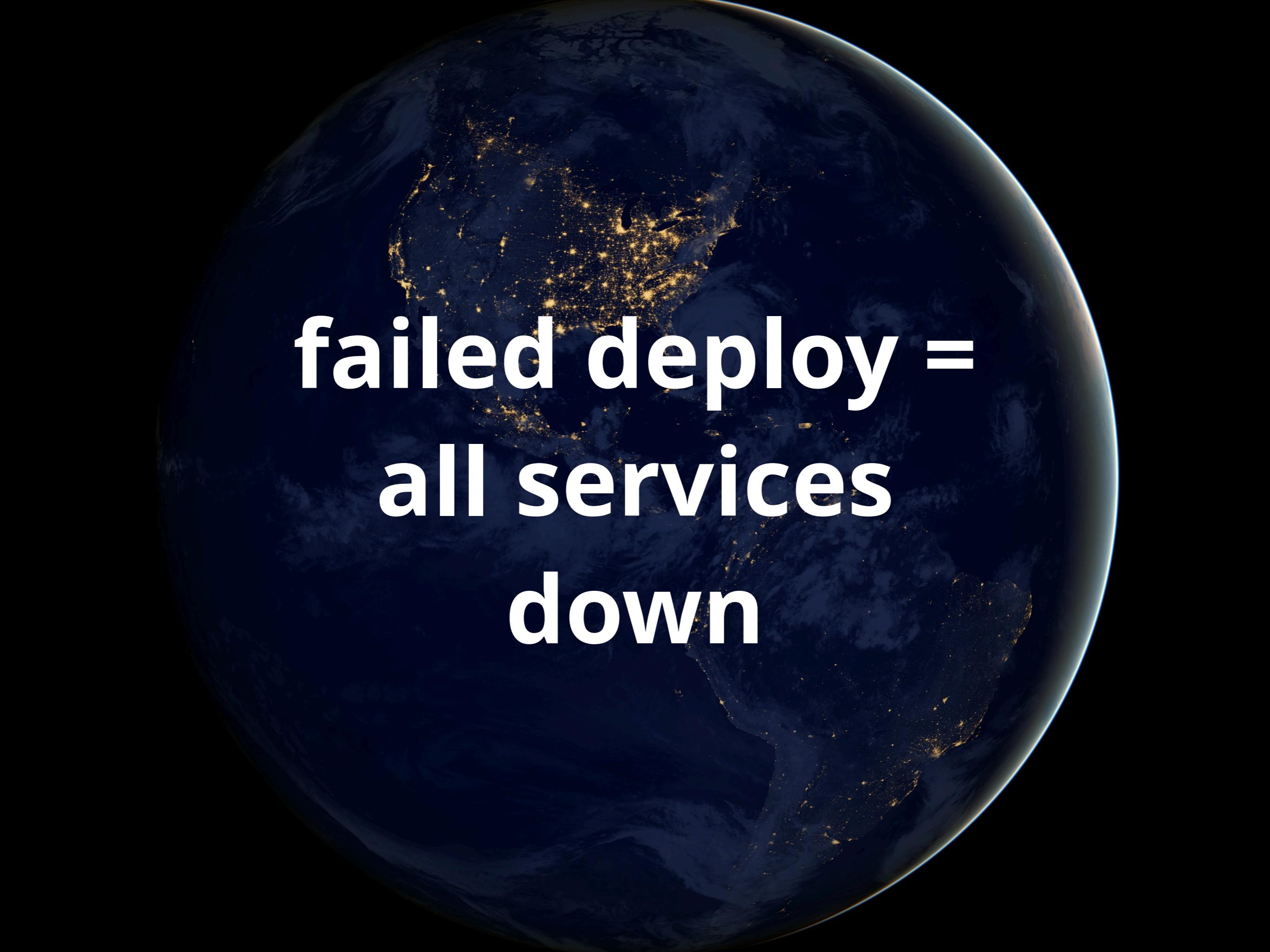
feed generation

embeddable, sharable player

admin dashboard

media analytics

were all a single app

A photograph of Earth at night, showing the illuminated city lights of North America and Europe against the dark blue and black oceans and continents.

**failed deploy =
all services
down**



this sucks.

it doesn't mean ruby is inherently
awful, but it didn't work for our app.



Intro: Why I chose Node.js over Ruby on Rails

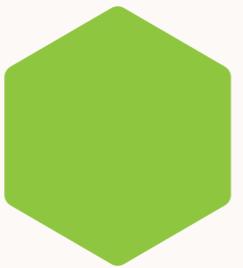
After a period of web development using PHP and later on Ruby on Rails, I have decided to put all my eggs in Node.js basket. Here's why.

First a disclaimer: this title isn't meant to ignite flames. It's just my subjective point of view based on my personal experience. Like a lot of people, I have been enjoying web development, front and backend, for a couple of years now. Backend-wise I started off with ASP somewhere in the early 2000's, and later on moved to PHP and then to Ruby on Rails (3) by 2010. Now I have settled on Node.js and I finally feel at home. Here are my



"I believe Node is capable of delivering the same, if not better, results than Rails for any Web development task, although it's slightly less mature ... and the conventions are less stable...."

- Sagi Isha, freelance web developer



```
var express = require('express')
, api      = express()
, web      = express()
, server   = express();

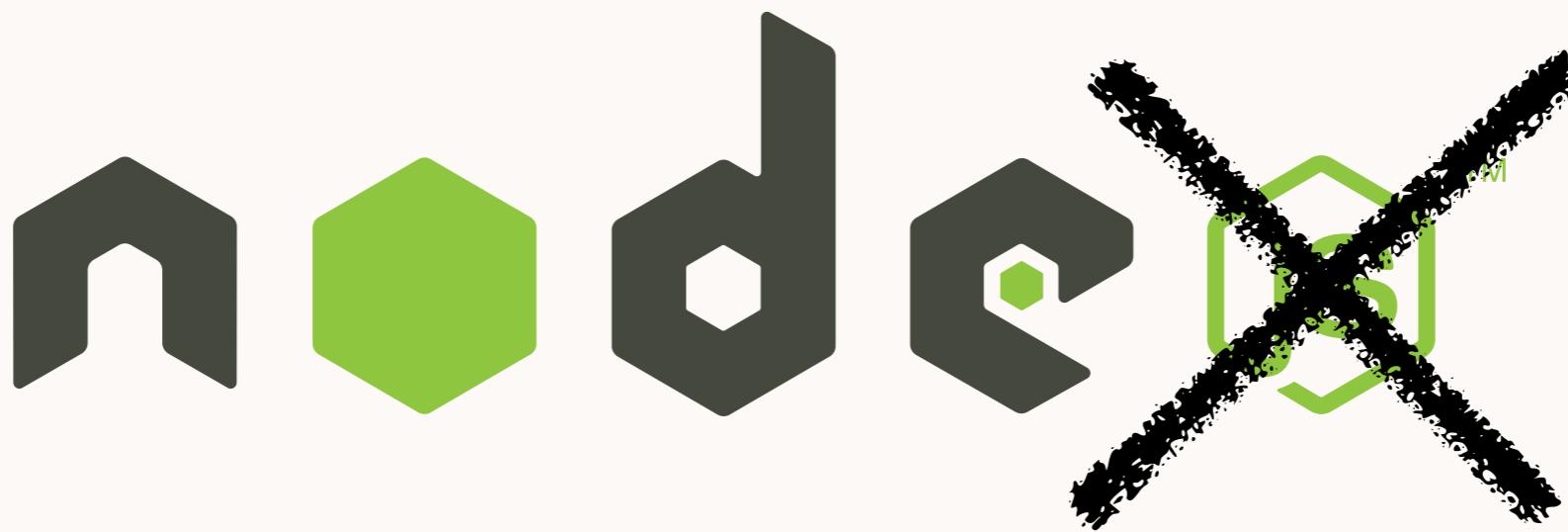
server.use('/', web);
server.use('/api', api);

server.listen(8000);
```

```
var express = require('express')
,
api = express()
,
web = express()
,
server = express();

server.use('/', web);
server.use('/api', api);

server.listen(8000);
```



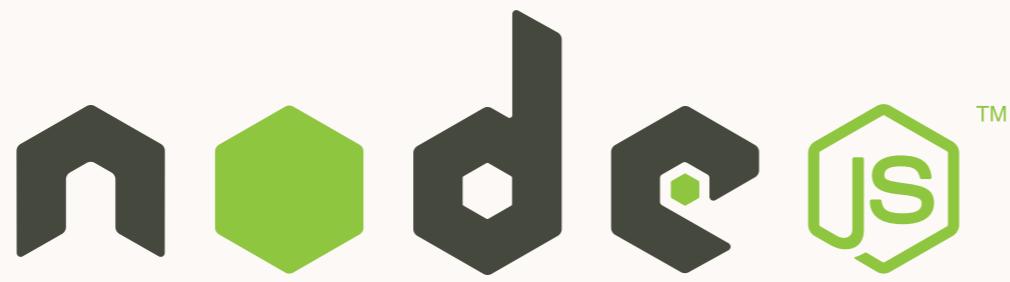


Node.js v0.10.33 Manual & Documentation

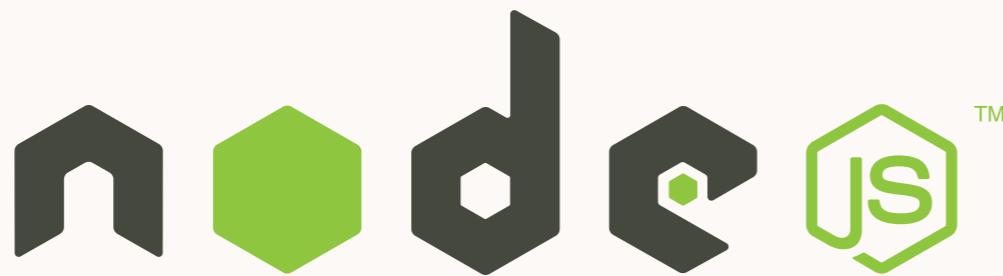
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encourages you to build small,
interconnected applications that each
tackle a specific domain.



CMS
Feed Generation
Embeddable Player
Media Analytics

Applications



Models
Config

Dependencies

let's talk
javascript

common application stack

-

express

-

mongodb

-

zeromq

common application stack

- **distributor**
- **storage**
- **transport**

DEMO

prototype
relentlessly

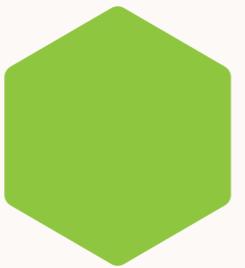
**break
BEFORE
you build**

ask

what do I need?

can each function of your app

**operate
discreetly?**



Q & A

ask me anything



@nicholaswyoung

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