Frontend Masters

HTML Email v2

Developing modern, responsive emails for everyone.

Jason Rodriguez

```
<img src="email.jpg">
```

I’m Jason Rodriguez

Email evangelist at Litmus, author of a few books on email design, all around email educator.

rodriguezcommaj.com

@rodriguezcommaj

What We'll Be Doing Today

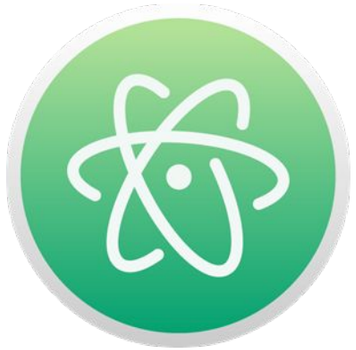
Pre Lunch

HTML and CSS for email and accessibility.

Post Lunch

Layouts, responsive design, and interactivity.

Basic Tools



```
71
72      <!-- Container: Set defau
73      <div style="background-co
            line-height: 1.4; mar
74
75          <!-- Logo image -->
76          <img src="https://lor
                display: block; m
77
78          <!-- Headline -->
79          <h1 style="margin: 0
80
81          <!-- Hero image -->
82          <img src="https://lor
                 display: block;
83
84          <!-- Body copy -->
85          <p style="margin: 2em
            Reprehenderit tempori
            debitis dolores. Eos
86          <p style="margin: 0 0
            Reprehenderit tempori
            debitis dolores. Eos
87
88          <!-- CTA -->
89
90          <!-- Footer informati
91          <div style="border-to
                padding: 1em 0;">
92              <p style="margin:
                better for everyo
                you'd like.</p>
93          </div>
94      </div>
95
```

ezcommaj/Desktop/frontendmasters/Code%20Exampl

Who loves H

Basic Tools

Lorem ipsum dolor sit amet, consectetu
temporibus quaerat tempora laborum,
quidem, ipsam debitis dolores. Eos del
aliquam.

Lorem ipsum dolor sit amet, consectetu
temporibus quaerat tempora laborum,
quidem, ipsam debitis dolores. Eos del
aliquam.

You're receiving this email because you're t
Good on you! Don't worry, you can unsubsc

Basic Tools

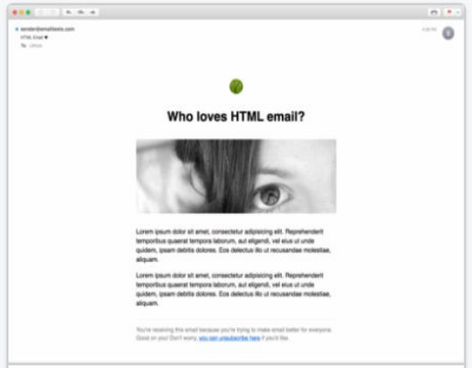
litmus

litmus

Jason Rod

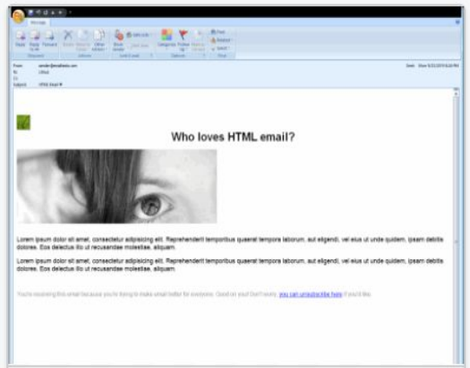
42 out of 87 clients selected. Choose email clients

Color Blindness (Simulated)

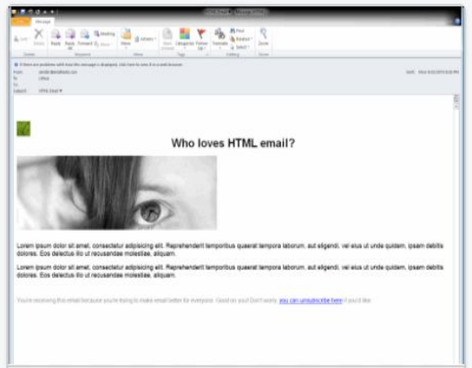


Apple Mail 11 (macOS 10.13)

Apple Mail 12 (Da

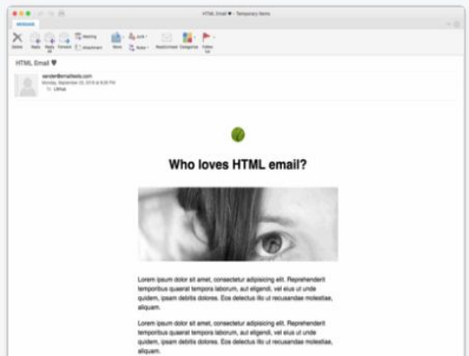


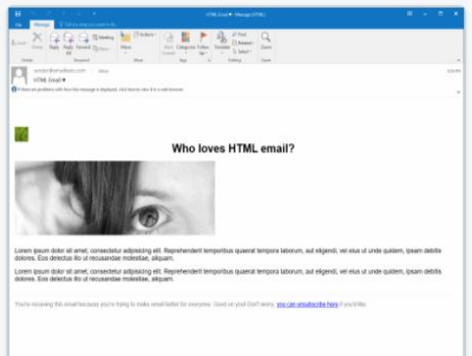
Outlook 2007 (Windows 10)

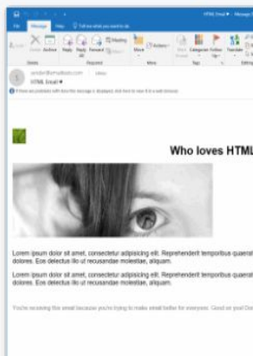


Outlook 2010 (Windows 10)

Outlook 2013 (Wi







Grab the Code

bit.ly/2mNErYM

github.com/rodriguezcommaj/frontendmasters

Why does email matter?

3.9 billion email users in 2019 (Radicati Group)

2.5 hours per weekday spent in email (Adobe)

$42 made for every dollar spent (Litmus)

… all despite email being dead for years.

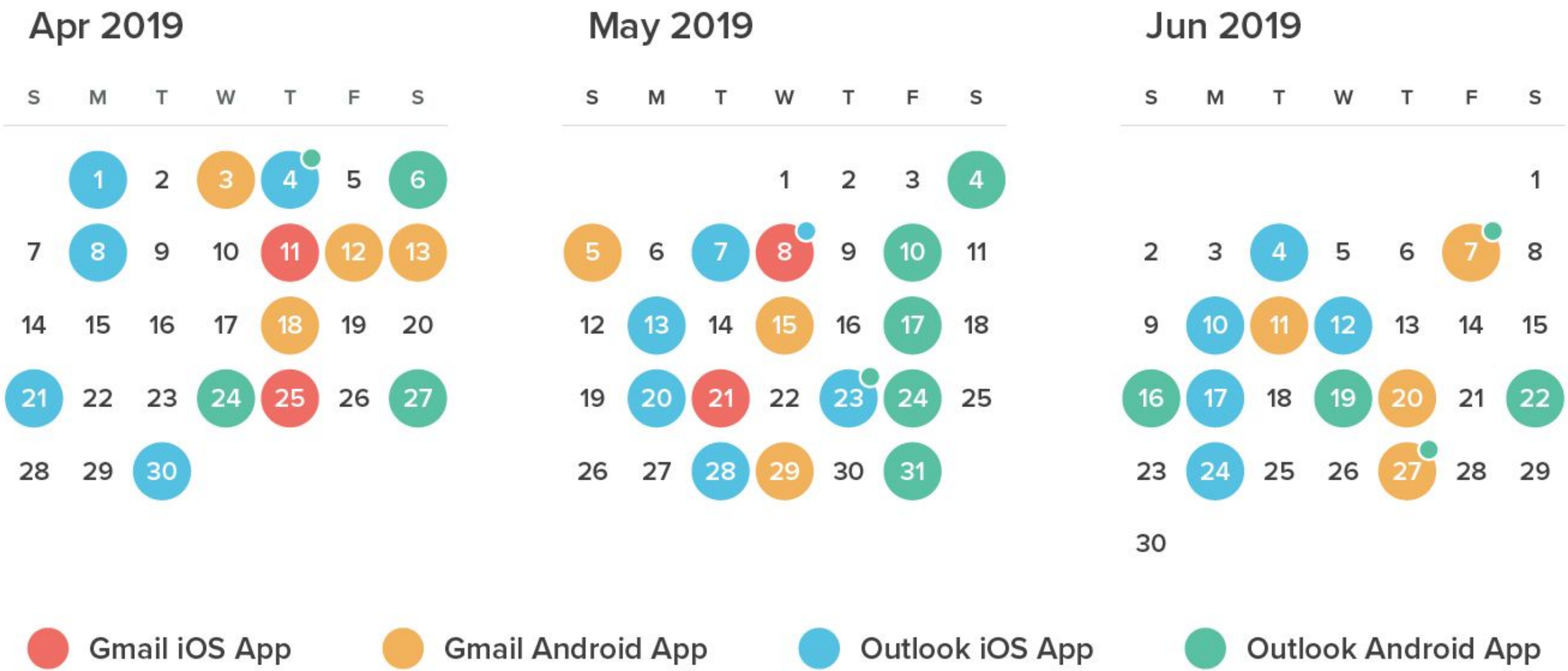
Why does email matter?

Email is easy to send and relatively affordable.

Tracking email is simple.

Testing email is quick and makes iterating easy.

Email is forgettable. Sucks for posterity, but good when we screw up.



Source: Litmus

No one really owns email.

It’s universal.
It’s ubiquitous.
It makes money.

HTML and CSS for Email

It’s not quite the web you know…

We’ll learn about:

HTML and CSS essentials

How to apply them to email

Hotmail

Windows Live

2
Mail

YAHOO!

Aol.

There are **no standards**.

Web ≠ Email

What works

Basic HTML

Basic CSS

Table-based design

Simple semantics

What Doesn’t

Float-based designs

CSS grid-based designs

JavaScript

A lot of CSS

A Basic Document

Check out **Starter.html**

CSS Resets

We need to reset:

Microsoft Office behavior
Browser and client default behavior
Blue auto-linking behavior

BOSTON BECKONS FROM $179

- Get away Thurs-Sun
- Or get 15% off our best available rate Mon-Wed
- Stay June 20 - September 2, 2013

Email-Friendly HTML

Use these for most things:

Basic, non-structural containers: **`div, span`**
Headings: **`h1 - h6`**
Other text: **`p, strong, em`**
Images: **`img`**

Your turn:

Add a heading and some text to your basic email.

Where do we put our styling?

~~Linked stylesheets~~

Embedded styles

Inline styles

Email-Friendly CSS

For text:

`color, font-family, font-size, font-style, font-weight, line-height, text-align`

For block-level elements:

`margin, padding, width, max-width`

Your turn:

Adjust the styles (inline) for the text in your email.

Links and Buttons

Some guidelines:

Use descriptive links
Embrace link conventions
Don’t use images for buttons

See **Buttons.html** for button examples.

Your turn:

Go to buttons.cm, create something cool, and add it to your email.

Images in Email

Some guidelines:

Make images responsive by default!

Use alternative text

Stick to the standbys: **`jpg, png, gif`**

Responsive Images

Set a fixed width as an HTML attribute for Outlook.
Use **`max-width: 100%; min-width: X;`**
`width: 100%;` to make them adjust across screen sizes.

View this email on a mobile device.
Here's what's on our style radar this month...
If you can't see the images in this email, click here.

J.CREW

WOMEN MEN KIDS WEDDING SALE FORWARD

SEPT

Here's what's on our style radar this month...

—FALL EXTRAS

THE HANDBAG & SHOE SHOP

Our roundup of luxe and colorful extras. Plus, enjoy complimentary shipping and returns on all handbags and shoes.*

VISIT THE SHOP 〉

—STYLE STORY

LOOKS WE LOVE

Our latest must-copy outfits for fall, courtesy of our superstylist, Gayle. What's new this month? Tons of textures, layering and menswear-inspired prints.

SEE THE LOOKS 〉

—FABRIC FOCUS

View this email on a mobile device.
Here's what's on our style radar this month...
If you can't see the images in this email, click here.

JCrew.com

Women Men Kids Wedding Sale JCrew.com Forward

JCrew.com

JCrew.com

JCrew.com

Your turn:

Add a small logo at the top of your email, and a hero image in the body. Make them responsive!

Background Images in Email

See **Background-Image.html** for example.

Most reliable on table cells (**`td`**)

Use both HTML attributes and inline CSS

Creating Accessible Emails

How to make emails **accessible for everyone**.

285 Million Low Vision Users

39 million of which are blind

8% of Men are Colorblind

0.5% of Women are, too

Accessible Design

Some guidelines:

Keep color contrast high

Create a strong visual hierarchy

Focus on readability

Keep layouts simple and usable

Loveramics

Coffee culture is at the heart of Loveramics – as evidenced
ceramics brand's in-house coffee bar, installed by founder V
Lee last year. Lee launched the modern homeware brand w
wife in 2008. Since then a global boom in coffee shops a
restaurants has given the business a caffeine kick that n
accounts for more than half of revenue. Brightly coloure
Loveramics cups serve up cappuccinos and flat whites all o
world, from Brooklyn-based Colombian roastery Devoción
UK's Has Bean. "Hong Kong is in a really great position, a
centre of the world," says Lee.

DISCOVER MORE:

Loveramics

Coffee culture is at the heart of Loveramics – as evidenced by the ceramics brand's in-house coffee bar, installed by founder William Lee last year. Lee launched the modern homeware brand with his wife in 2008. Since then a global boom in coffee shops and restaurants has given the business a caffeine kick that now accounts for more than half of revenue. Brightly coloured Loveramics cups serve up cappuccinos and flat whites all over the world, from Brooklyn-based Colombian roastery Devoción to the UK's Has Bean. "Hong Kong is in a really great position, at the centre of the world," says Lee.

DISCOVER MORE:

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Maecenas porttitor, augue at rhoncus commodo, nibh nulla feugiat odio, bibendum ornare dolor arcu id nibh. Quisque nibh risus, dignissim nec, ultricies eu, bibendum fringilla, ligula. Curabitur vehicula. Mauris laoreet. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Maecenas lacus. Donec erat. Nunc eleifend magna a massa.

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Maecenas porttitor, augue at rhoncus commodo, nibh nulla feugiat odio, bibendum ornare dolor arcu id nibh. Quisque nibh risus, dignissim nec, ultricies eu, bibendum fringilla, ligula. Curabitur vehicula. Mauris laoreet. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Maecenas lacus. Donec erat. Nunc eleifend magna a massa.

What’s the best way to make emails accessible?

Use real text.

STRAVA

Your April Stats

4
active days

Share your #stravastats

Total Distance

9mi

Strava |

Athlete Img

Your April Stats

4
active days

Share your #stravastats

Total Distance

9mi

9 more than last month

Accessible Development

Some guidelines:

Keep tables quiet using **`role="presentation"`**

Use semantic markup to reinforce hierarchy

Include text alternatives for images

Include the language of an email

Testing Emails for Accessibility

Screen readers: **NVDA, VoiceOver, JAWS**

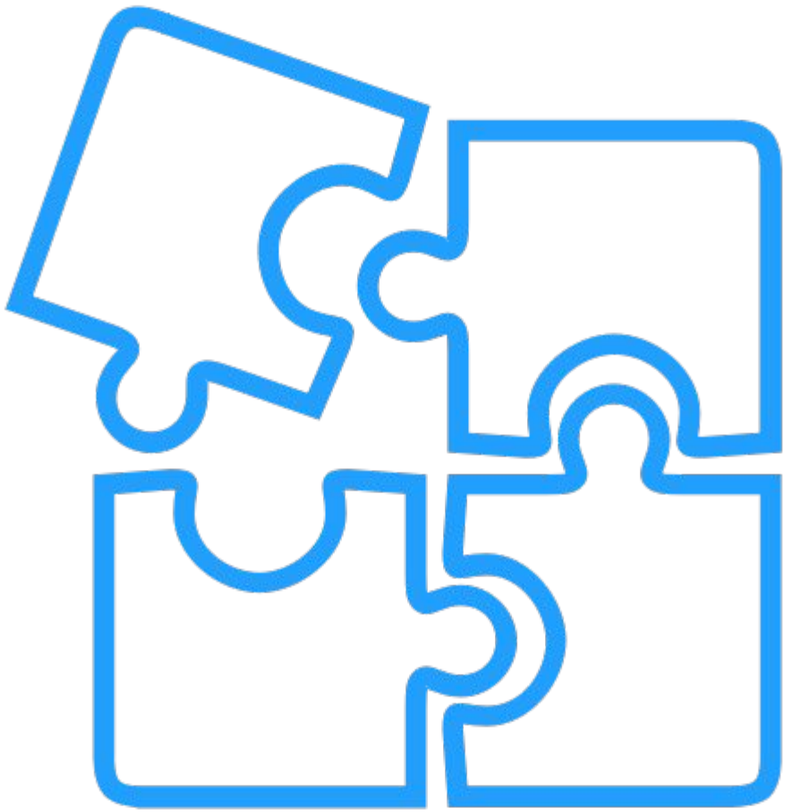
Browser extensions

Litmus Accessibility Checker

Email Layouts

How to structure emails to work across clients…

… or how to bring table-based designs back.



Think in Modules

It’ll make your life easier.

Using Tables in Email

Some guidelines:

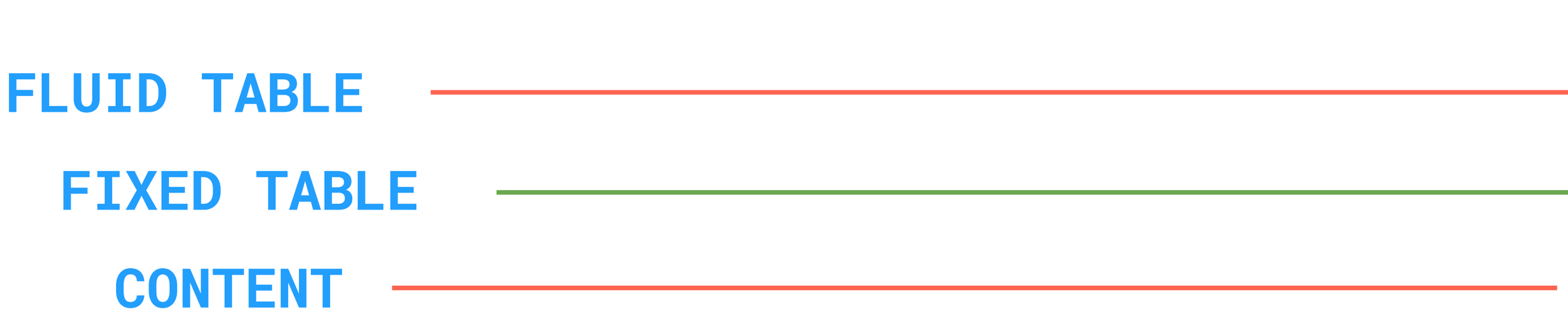
Keep tables quiet using **`role="presentation"`**
Ignore table headers, body, footer
Keep components in their own rows/tables
Overwrite defaults using HTML attributes
Place most styles on table cells

Boilerplate Tables

```
<table border="0" cellpadding="0" cellspacing="0"
role="presentation" width="100%">
  <tr>
    <td style="styles go here">
    </td>
  </tr>
</table>
```

Single Column Layouts

Basic structure is:



Your turn:

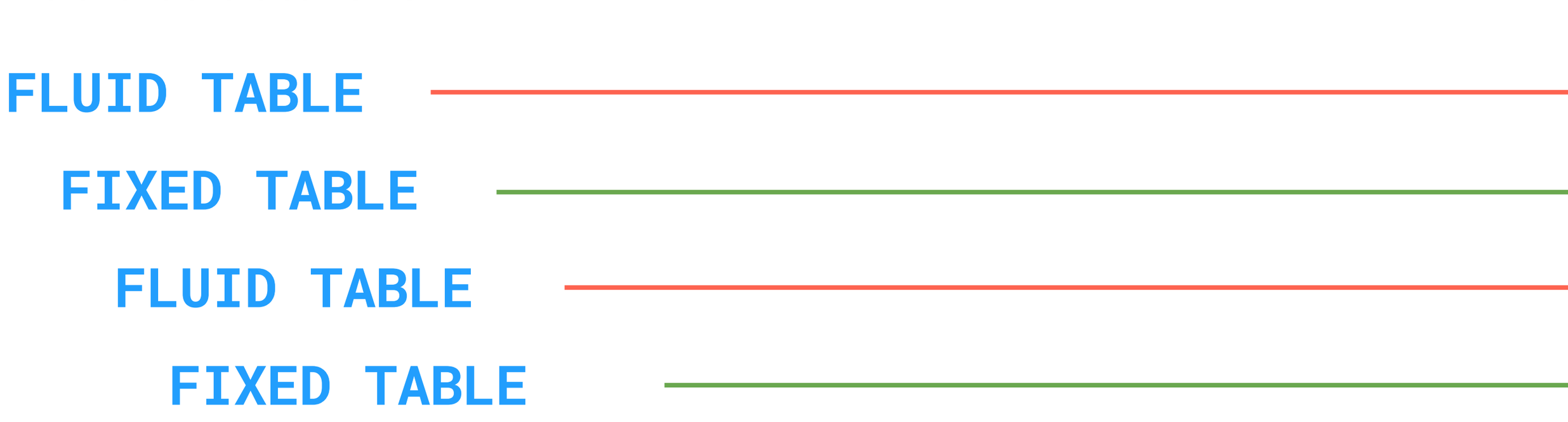
Create a single column layout 600px wide using tables.

Single Column Layouts

Check out **Single-Column-Tables.html**

Multiple Column Layouts

Basic structure is:



Your turn:

Add a two column section into your email with some copy. Try three columns, too.

Multiple Column Layouts

Check out **Multiple-Columns-Tables.html**

Making Emails Responsive

3 Approaches to Mobile Email

1. Mobile-aware
2. Traditional responsive
3. Hybrid or “spongy” coding

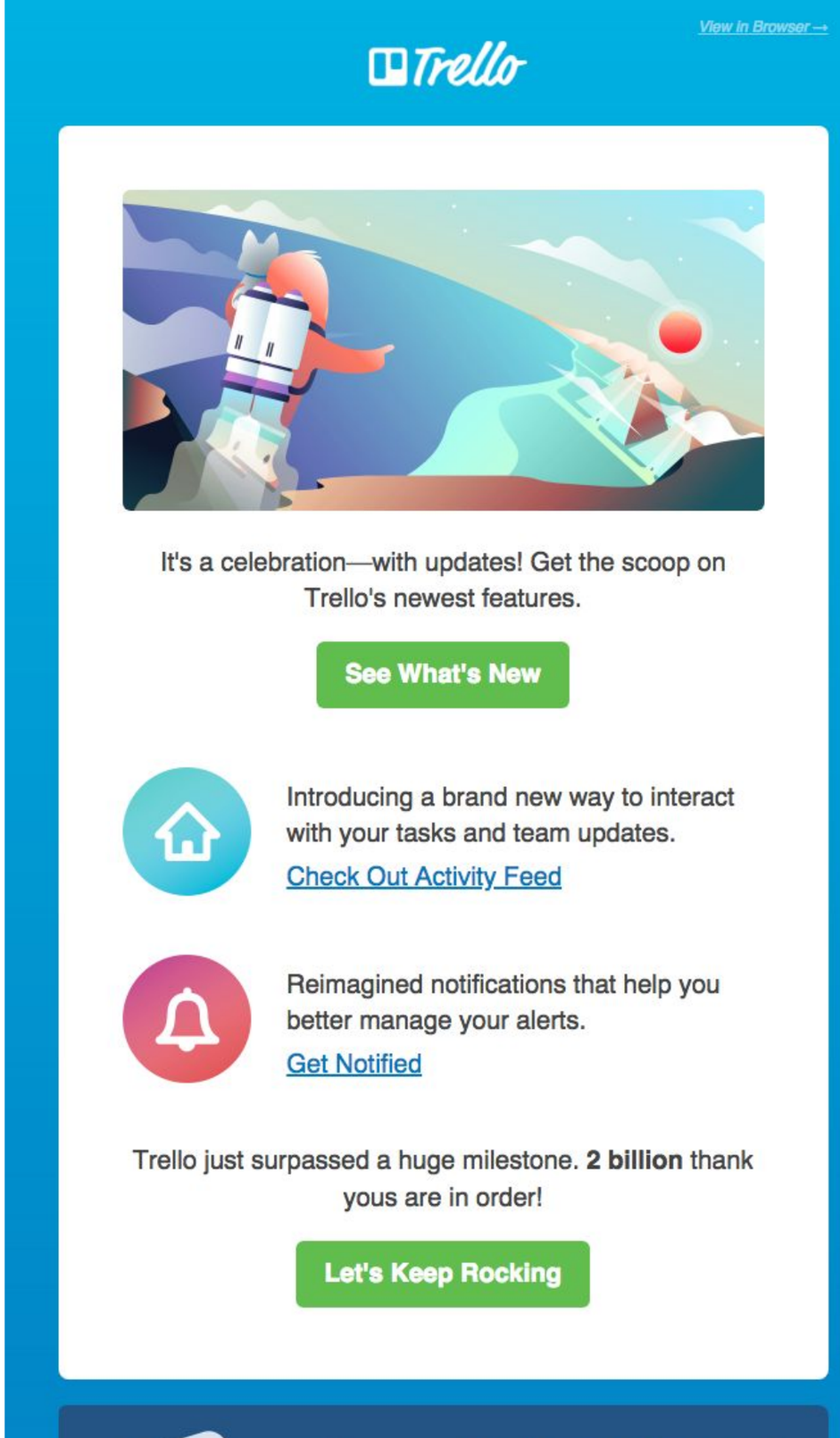
Mobile-Aware Design

Simple layouts

Large text

Large buttons

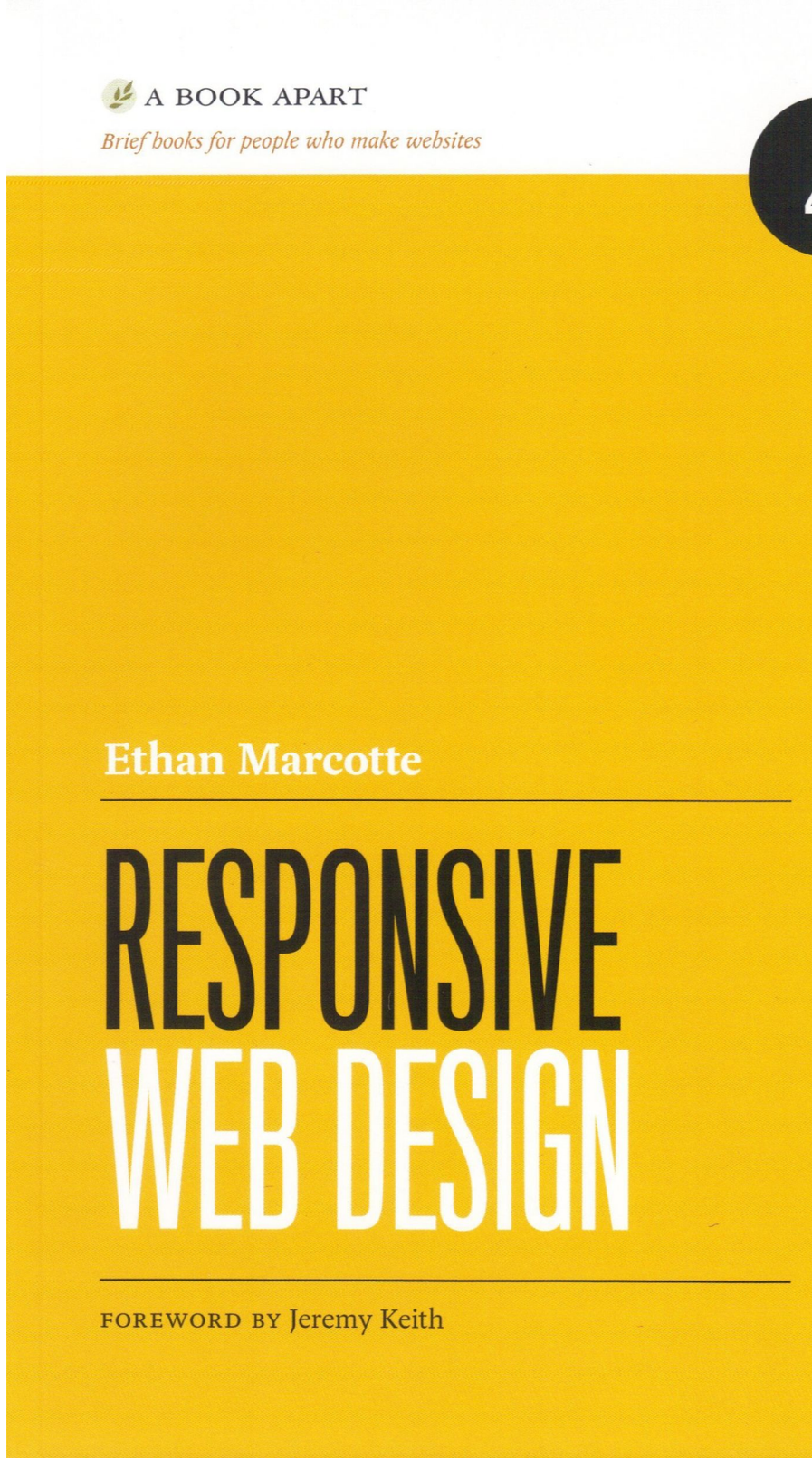
Design scales down



Traditional Responsive

Just like on the web… but with tables.

1. Fluid layouts
2. Fluid images
3. Media queries for adjustments



Your turn:

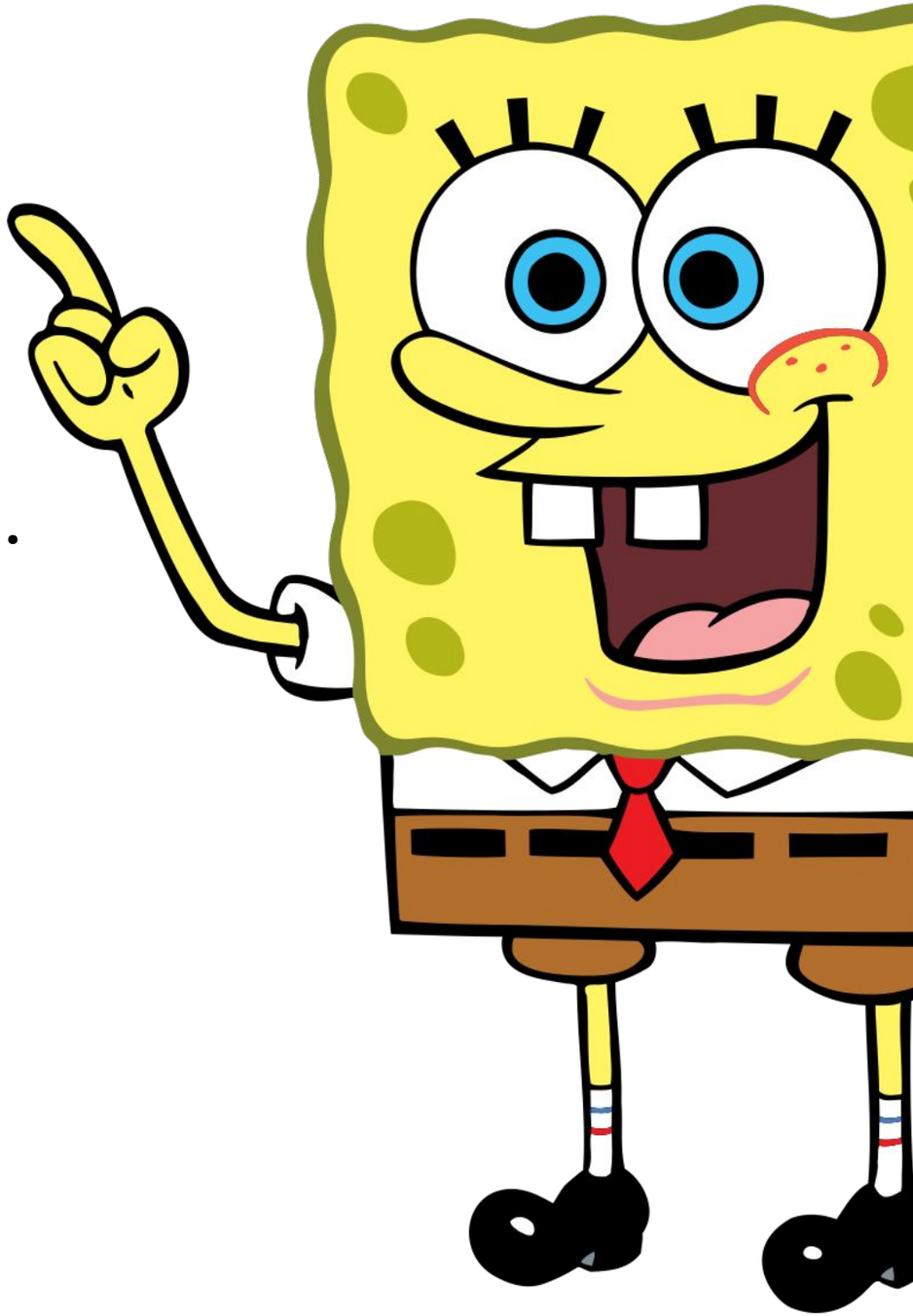
Take your multi-column layout and make the columns stack on mobile. Adjust the text size, too.

Traditional Responsive

See **Multiple-Column-Tables.html** for an example.

Hybrid/Spongy Coding

For when you need to get non-traditional.



1. Fluid by default
2. **`max-width`**
3. MSO ghost tables

What are MSO ghost tables?

A handy way to target Microsoft Office!

```
<!--[if (gte mso 9)|(IE)]>
<![endif]-->
```

MSO Targeting

Outlook 2000: **Version 9**
Outlook 2002: **Version 10**
Outlook 2003: **Version 11**
Outlook 2007: **Version 12**
Outlook 2010: **Version 14**
Outlook 2013: **Version 15**

`gte` = Greater Than Equal To
`gt` = Greater Than
`lte` = Less Than Equal To
`lt` = Less Than

Hybrid/Spongy Coding

See **Single-Column-Hybrid.html** for an example.

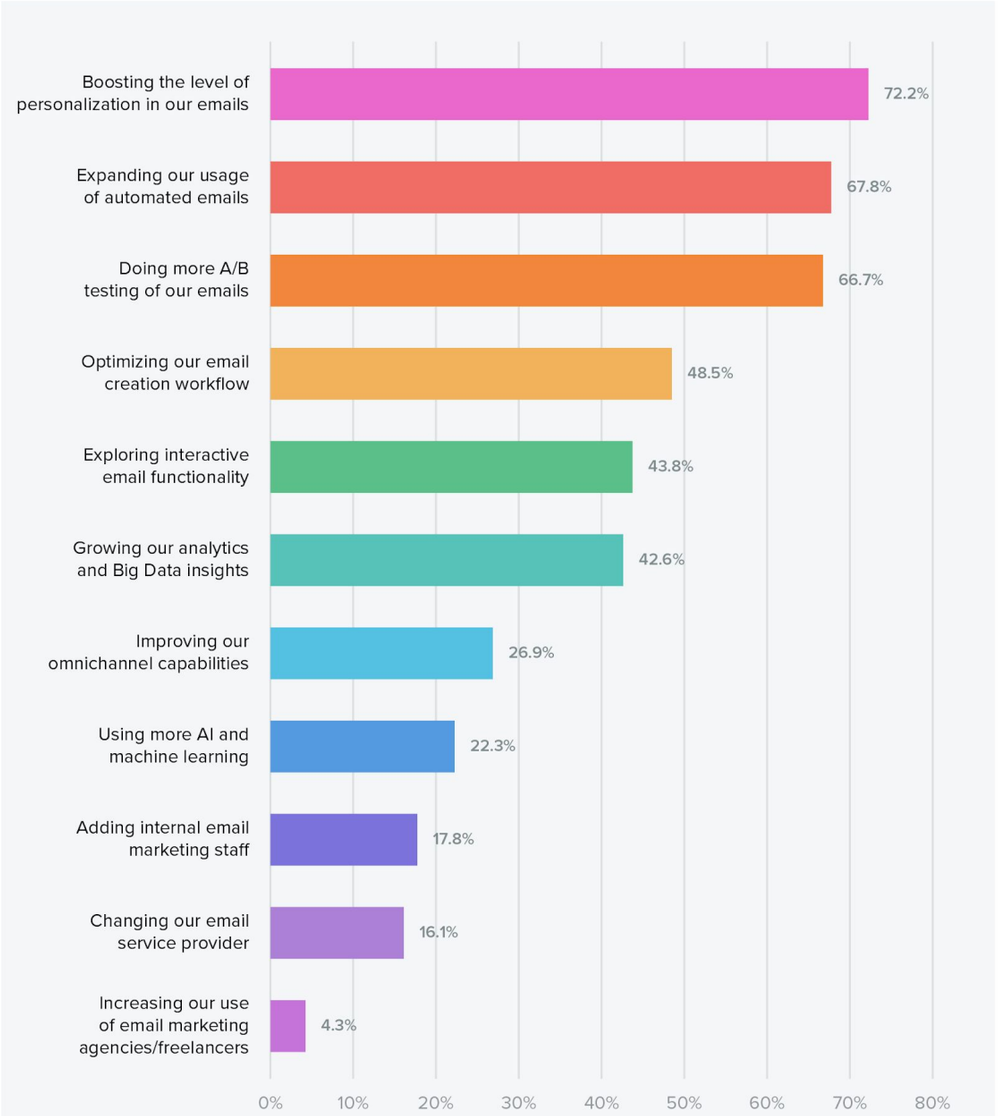
Animated and Interactive Emails

Add a little fun and functionality to your campaigns.

litmus

Email Marketing Priorities for 2018

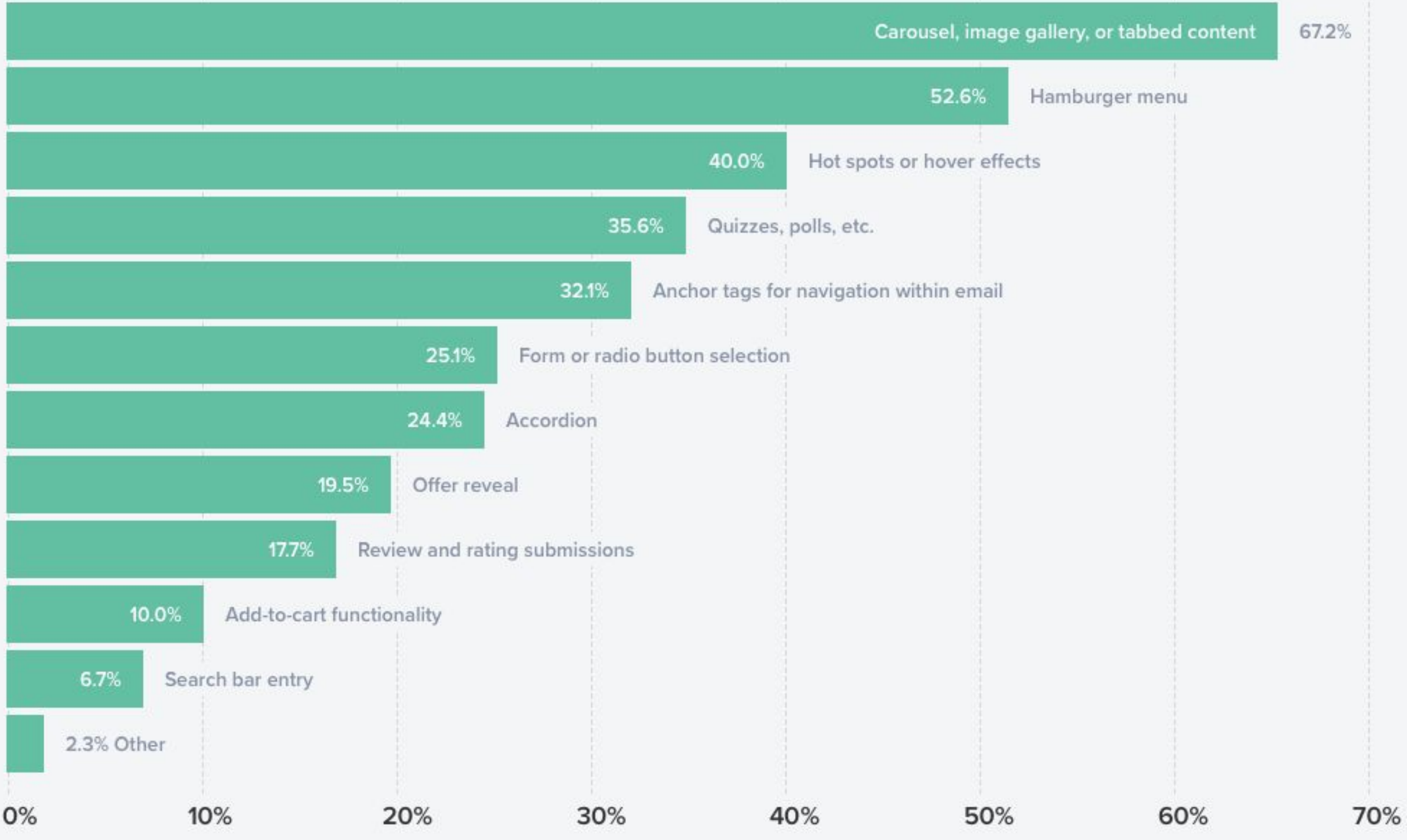
Which of the following, if any, is a priority for your email marketing program in 2018? (select all that apply)



1,675 respondents

Source: Litmus' 2018 State of Email Survey between Dec. 19, 2017 and Jan. 31, 2018.
More results at **litmus.com/stateofemail**.

43.8% of marketers want to prioritize interactivity in emails.


Carousel, image gallery, or tabbed content
67.2%
52.6%
Hamburger menu
40.0%
Hot spots or hover effects
35.6%
Quizzes, polls, etc.
32.1%
Anchor tags for navigation within email
25.1%
Form or radio button selection
24.4%
Accordion
19.5%
Offer reveal
17.7%
Review and rating submissions
10.0%
Add-to-cart functionality
6.7%
Search bar entry
2.3% Other
0%
10%
20%
30%
40%
50%
60%
70%

Interactivity Pros

Increased accessibility

Added functionality

Increased engagement

And Cons

Doesn’t work everywhere

Often complex

Harder to track

Flashy instead of functional

Simple Hover States

Great for accessibility and super easy to code.

Must be included in the **<head>** of your doc.

Uses the **`:hover`** pseudo selector.

See **CSS-Animations.html** for examples.

CSS Animations

Adds a nice touch to emails.

Use **`transition`** for simple effects.

Use **`@keyframes`** for more complex animations.

See **CSS-Animations.html** for examples.

```
@keyframes animation-name {
  from { some state }
  to { another state }
}
```

```
.class {
  animation: duration count name;
}
```

Your turn:

Create an interactive hover state for your button. Make it do more than change background colors.

Jackthreads

Reclaim Your Gear + Get 10% Off!

You left these items in your cart. Purchase these items in the next 24 hours to grab your discount.

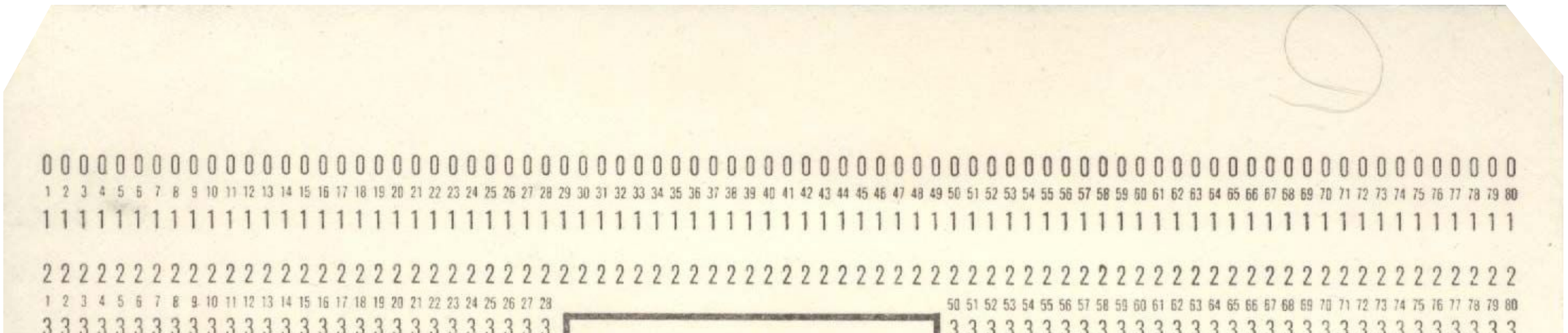
ITEM	QTY	TOTAL
Goodale Norwood Corduroy Pant ~~$350.18~~ $249.00 Color: Tan Size: 32 Edit Remove	1	Sale $249.00
Retrofit Aztec Raglan Hoodie $58.00 Color: Dk Char Hea Size: M Edit Remove	2	$116.00
Of All Threads Bull Dogs & Birds $12.00 Edit Remove	1	$12.00

Subtotal:	$377.00
Tax:	$18.85
10% Discount:	$39.59
Total Price:	$395.85

The Checkbox Hack

Use checkboxes and radio inputs to track state.

Selectively hide and show content, or adjust styles, based on state.



A Simple Interactive Example

Check out **Interactivity.html** for details.

Your turn:

Add three inputs, three labels, and three "slides" to your email. Use the labels to make the slides swap using `display`.

AMP Email

Google

Your turn:

Explore the AMP documentation and test drive a few examples in the AMP Playground.

Testing, Tools, and Resources

A few things to guide you on your way…

Testing Emails

litmus

File Templates Partials Snippets Tracking Timeline View Help

Share Send Test Sync to ESP

Dynamic Content Complex

HTML

```
<!DOCTYPE html>
<html lang="en">
    <head>
        <title>Wonderblum *</title>
        <meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
        <meta name="viewport" content="width=device-width, initial-scale=1">
        <meta http-equiv="X-UA-Compatible" content="IE=edge" />
        <link rel="shortcut icon" type="image/png" href="https://thebetter.email/favicon.png">
        <style type="text/css">
            /* CLIENT-SPECIFIC STYLES */
            body, table, td, a { -webkit-text-size-adjust: 100%; -ms-text-size-adjust: 100%; }
            table, td { mso-table-lspace: 0pt; mso-table-rspace: 0pt; }
            img { -ms-interpolation-mode: bicubic; }

            /* RESET STYLES */
            img { border: 0; height: auto; line-height: 100%; outline: none; text-decoration:
none; }
            table { border-collapse: collapse !important; }
            body { height: 100% !important; margin: 0 !important; padding: 0 !important; width:
100% !important; }

            /* iOS BLUE LINKS */
            a[x-apple-data-detectors] {
                color: inherit !important;
                text-decoration: none !important;
                font-size: inherit !important;
                font-family: inherit !important;
```

Choose email clients

Browser | Run Email Previews

Apple Mail 10 (macOS 10.12)

Apple Mail 11 (macOS 10.13)

Apple Mail 9 (OS X 10.11)

Outlook 2016 (macOS 10.12.6)

iPad (Retina) (iOS 11.0)

iPad Mini (iOS 11.0)

Testing Emails - Putsmail.com

Recipients – up to 10 email addresses

Where we will send your email

Add

Subject Line

Enter the subject line

Body (HTML)

HTML | Apple Watch | Plain Text

```
1
```

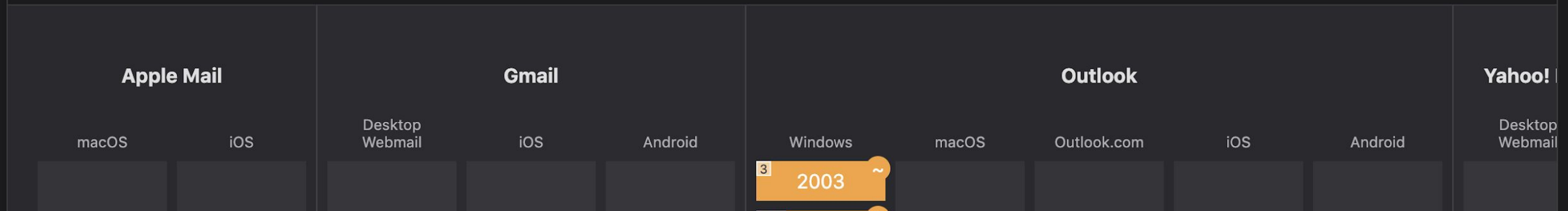
Troubleshooting - Caniemail.com

Can I email HTML, CSS, ... ?

@font-face

`@font-face` in CSS allows to include your own fonts inside an email.

Apple Mail
Gmail
Outlook
Other clients



Troubleshooting - Campaignmonitor.com/css

Desktop	Mobile	Webmail
✓ AOL Desktop	✓ Android 4.2.2 Mail	✗ AOL Mail
✓ Apple Mail 10	✓ Android 4.4.4 Mail	✓ G Suite
✓ IBM Notes 9	✗ AOL Alto Android app	✓ Gmail
✓ Outlook 2000–03	✗ AOL Alto iOS app	✓ Google Inbox

Troubleshooting - Freshinbox.com/resources

Kinetic Email CSS Support

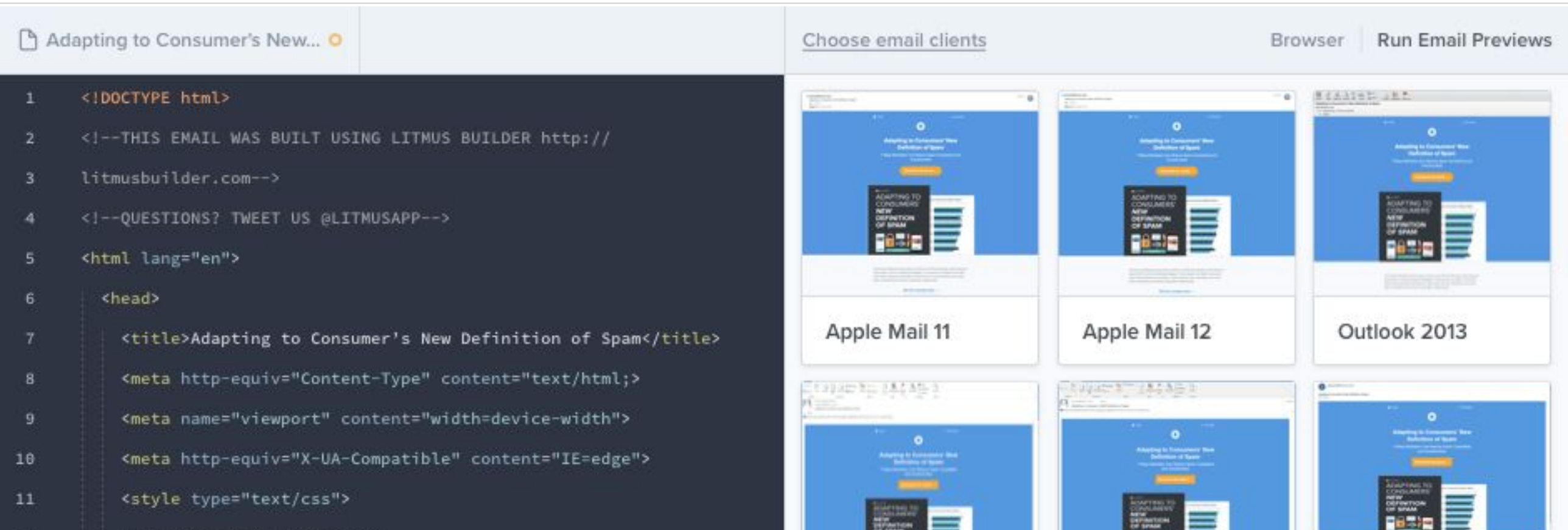
The following table lists the major HTML & CSS features that are commonly used by interactive and dynamic CSS techniques and their support among the major email clients.

Summary of Quirks

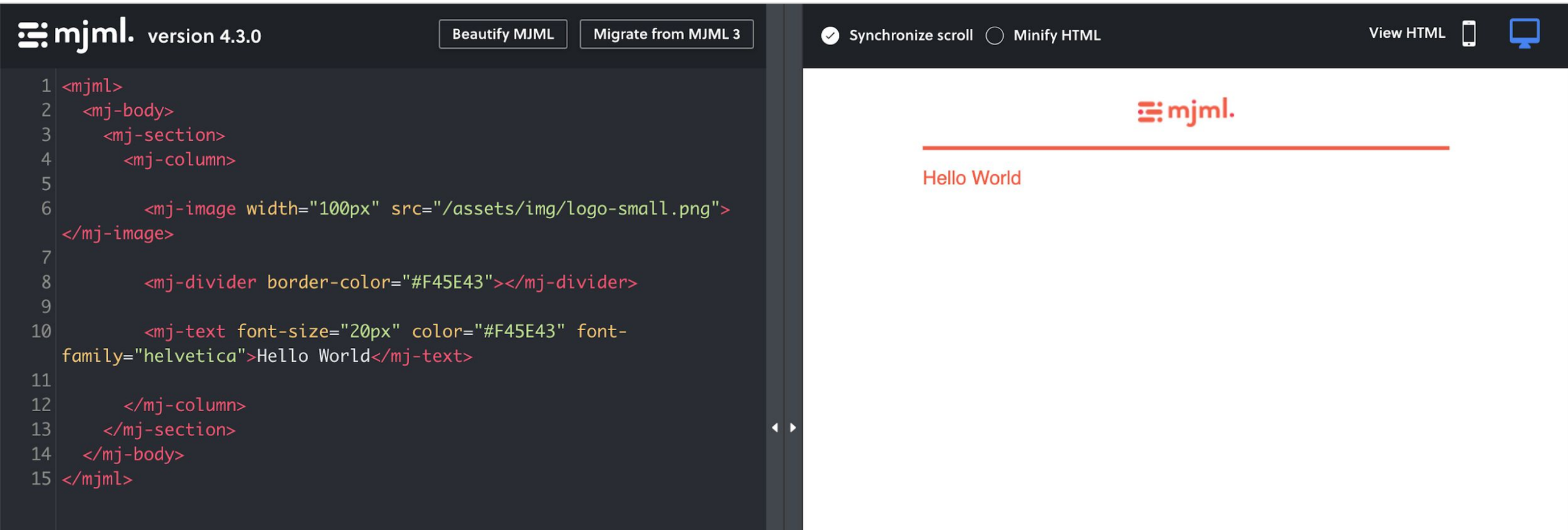
Learn more about kinetic email.

Feature	Android/ Samsung	AOL Mail	Apple Mail	Gmail	Gmail App	iOS	Outlook 2007-2016	Outlook.com/ Office 365	Outlook App	Outlook Mac	Yahoo! Mail	YMail App
Kinetic support ?				?	?				?		?	?

Tools - Litmus Builder



Tools - mjml.io



Tools - Foundation.zurb.com

v2.2.0

(Changelog)

GETING STARTED

- Overview
- CSS Version
- Sass Version
- Ruby Gem

GUIDES

- Using Sass
- Using Inky
- Media Queries
- ZURB Stack

Inky Library

Inky is a templating language that converts simple HTML tags into the complex table HTML required for emails.

Edit this Page Report a Bug Get Help

Overview

HTML emails require tables upon tables *upon tables* to work properly. Although Foundation for Emails takes a lot of the pain out of constructing these tables, we've made it even easier with **Inky**, a templating language that converts simple HTML tags like `<row>` and `<columns>` into complex table HTML.

Inky keeps you out of a sea of tables and focused on your email. Check out this example—click "Switch to Inky" to see the difference.

INKY **Switch to HTML**

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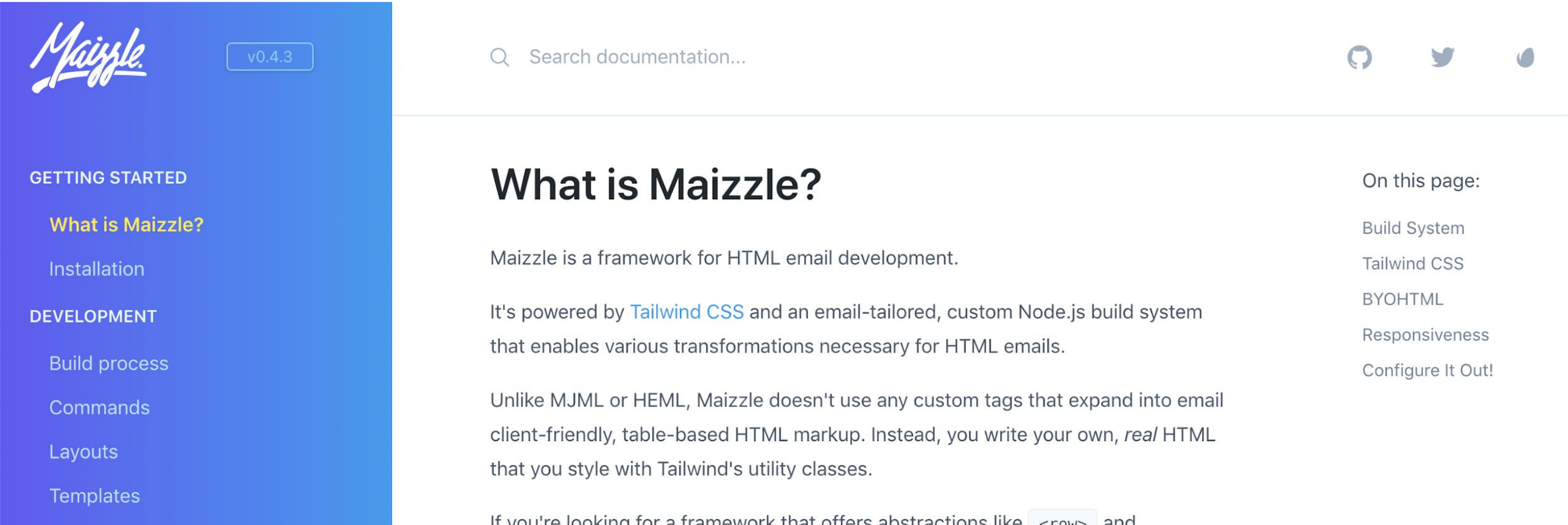
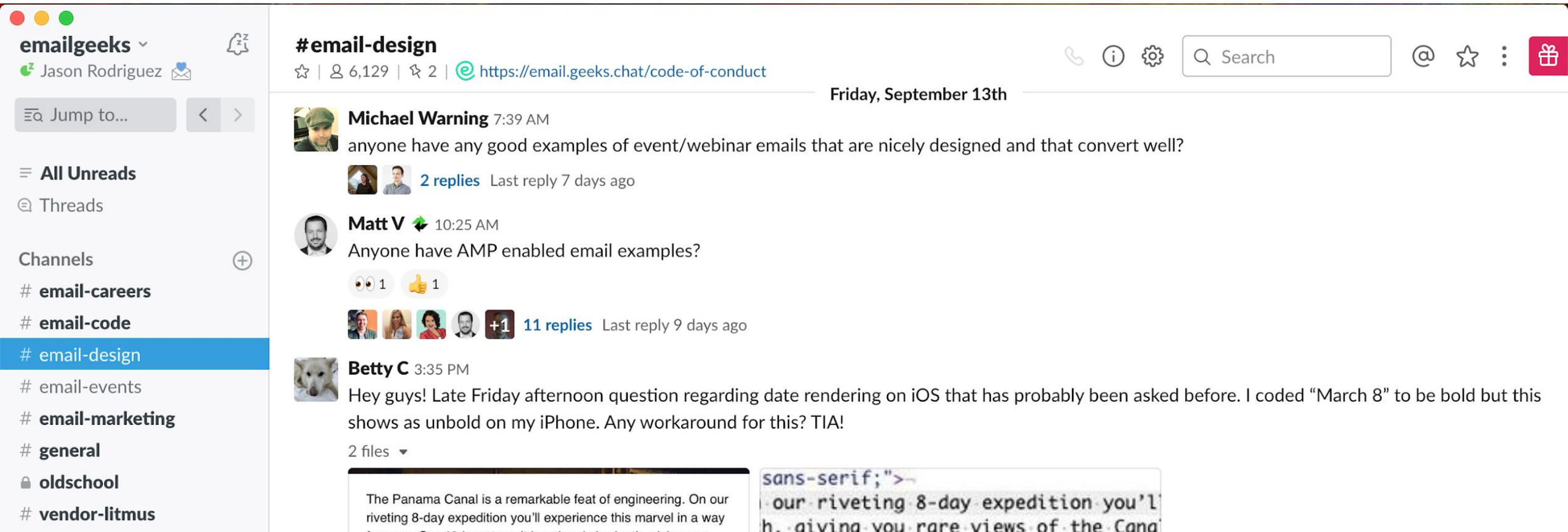
Tools - Maizzle.com



Resources - email.geeks.chat



Resources - Litmus.com/community

iOS 13 and the iPhone 11 are here: Avoid any email disasters - preview your emails on iOS 13 today and see if your emails look great in Dark Mode.

Learn more →

Display: block is back?

0 votes · updated 17 hours ago by Zoran Orak · 3

Design & Development

Resources - TheBetter.Email/resources

Email Marketing **Resources**

There's a lot of information out there on email. Frankly, a lot

Grab the Code

bit.ly/2mNErYM

github.com/rodriguezcommaj/frontendmasters

Thank you!

Email me at **jason@rodriguezcommaj.com** with questions.

Jason Rodriguez