

{ cpcinema }  
& associated journey

# @colorpalette.cinema



colorpalette.cinema

[Message](#)



1,128 posts

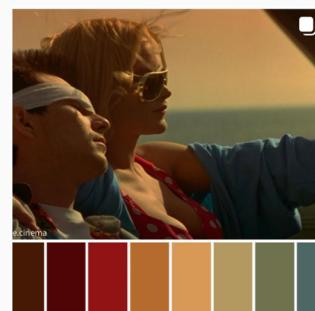
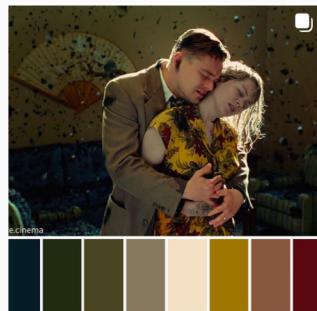
1.6m followers

515 following

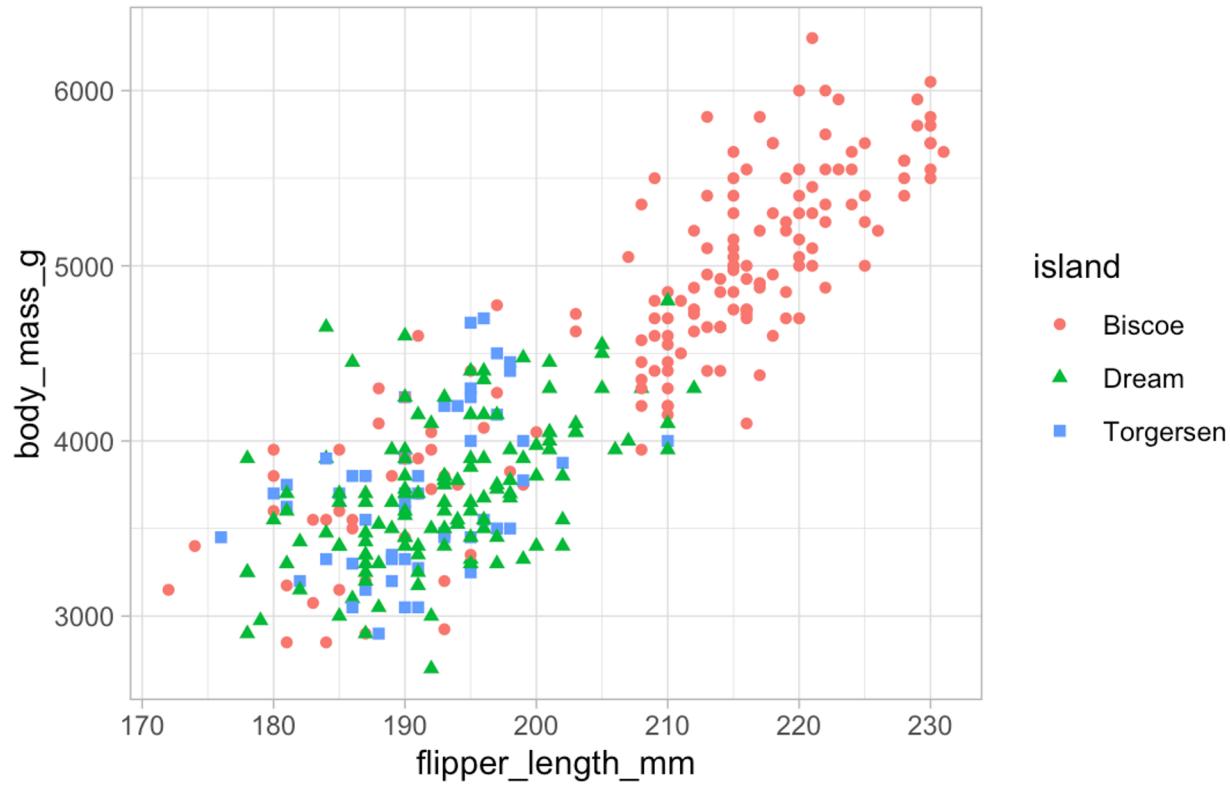
### Color Palette Cinema

Color can affect us psychologically,  
often without us being aware,  
and can be used as a strong device in a story.

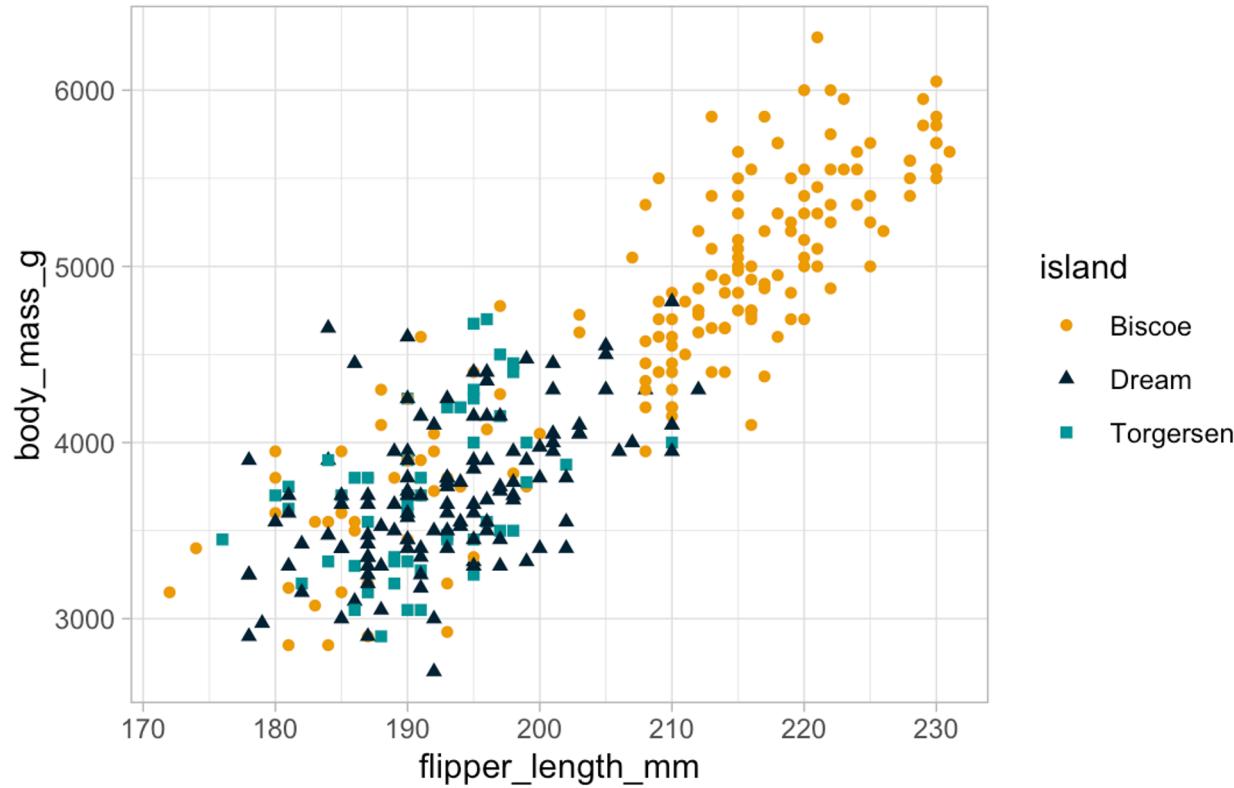
Followed by [pabs.feldman](#), [aseemdeodhar](#), [imanbengana](#) +25 more



tired



wired



# Given a post:



@colorpalette.cinema



<cpcinema[10]>

#010302
#001F0A
#002F0F
#204116
#022F35
#0B4F50
#668983
#A6927A
#5E3D2E
#271416

# Extract colors from post

```
pal <- pal_from_post("https://www.instagram.com/p/CMC26FaHbqP/")

<cpcinema[10]>
#010302
#041D0A
#002F0F
#204116
#032E34
#0E4E4E
#668983
#A6927A
#5E3D2E
#271416
```

# Extract colors from image

- Filepath: `images/01.jpeg`
- `extract_cpc_pal("images/01.jpeg")`

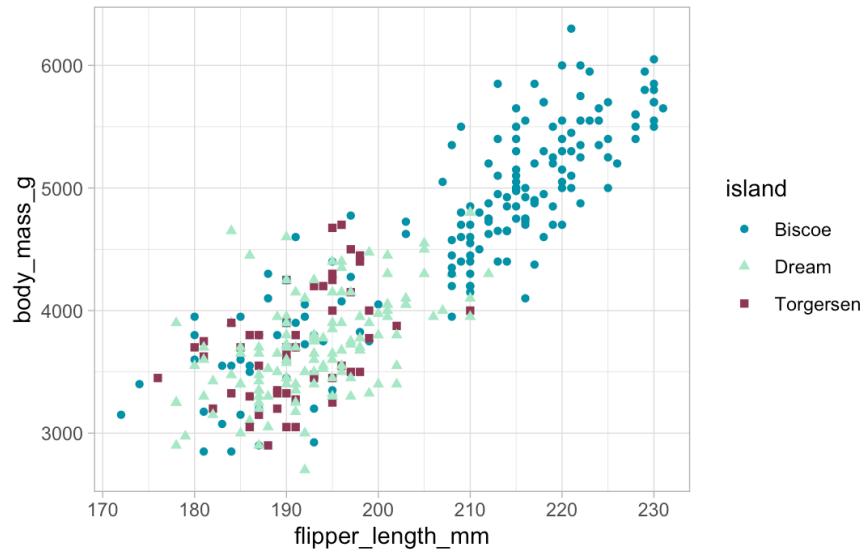
```
<cpcinema[10]>
#021736
#01466D
#3991A5
#3FD2C8
#B4E5C8
#E4AFC3
#8B5680
#833D55
#64234E
#341B39
```



# Example - discrete

```
pal <- extract_cpc_pal("images/01.jpeg")

ggplot(penguins,
       aes(flipper_length_mm, body_mass_g,
            color = island, shape = island)) +
  geom_point() +
  scale_color_manual(
    values = pal[c(3, 5, 8)])
) +
  theme_light()
```

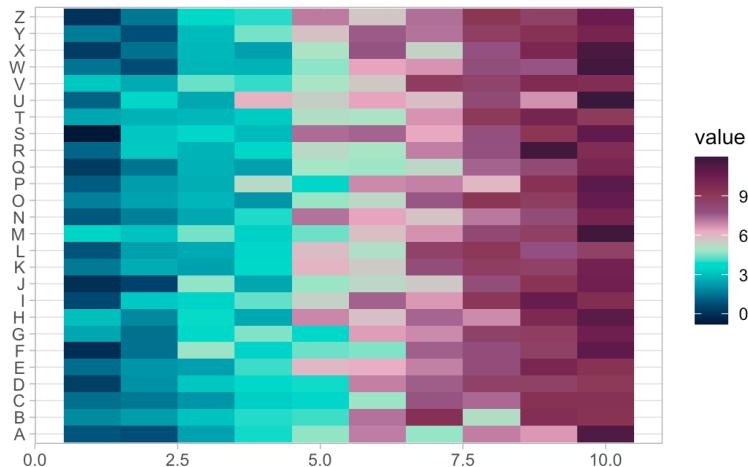


# Example – continuous

```
# make continuous scale
pal_c <- color_palette(pal, n = 100,
"continuous")

# make fake data
x <- expand.grid(group = 1:10, big = LETTERS) %>%
  group_by(group) %>%
  mutate(value = rnorm(n(), mean = group))

# plot that fake data
ggplot(x, aes(x = group, y = big, fill = value)) +
  geom_tile() +
  scale_fill_gradientn(colours = pal_c) +
  theme_light()
```



# How did we get here?

I think things sometimes.  
Sometimes that thinking becomes a thing.

# My thinking

- Graphs are informative
- Graphs are also kinda boring
- People like pretty things
- Make graphs pretty
- Pretty graphs are informative
- People enjoy pretty graphs

# My further thinking

- Data scientists want to make pretty graphs
- They aren't always most adept at color choices
- @colorpalette.cinema produces consistent styling
  - I'd like to have their palettes

# rstudio::conf(2020L) - deb vctrs

## Compound unit arithmetic

	£	s.	d.
28		15	8
32		8	11
54		18	7
18		12	9
<b>Answer</b>	<b>£134</b>	<b>15s.</b>	<b>11d.</b>
Unit total	132	53	35
Divide by base	-	53 / 20	35 / 12
Carried forward	2	2	-
Remainder	-	13	11

Create an S3 class for non-decimal currencies

```
lsd <- function(x, bases = c(20, 12)) {  
  structure(x,  
            class = "lsd",  
            bases = bases)  
}
```

```
lsd(c(134, 15, 11))  
#> [1] 134 15 11  
#> attr("class")  
#> [1] "lsd"  
#> attr("bases")  
#> [1] 20 12
```



RSTUDIO::CONF 2020

PROGRAMMING

## vctrs: Creating custom vector classes with the vctrs package

Jesse Sadler | January 30, 2020



circa Feb 2020

“What if made a package that takes colors from  
@colorpalette.cinema and makes them into a custom  
S3 class with a spiffy print method that shows the color?  
That would be dope.”

# Start small

1. Download an image
2. StackOverflow & Rbloggers like crazy
3. Extract color from image path
4. Replicate with a function
5. Can I get image from URL?

Apparently **NOT**

# Instagram's new Graph API is unworkable (to me)



jos  
@JosiahParry

...

The most wonderful `#rstats` package I've ever made for myself.

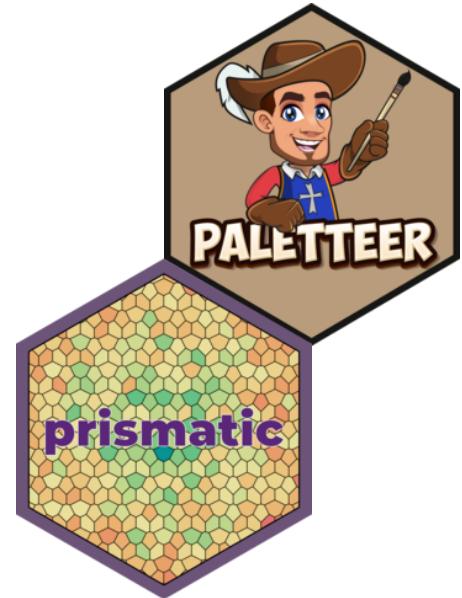


`<cpcinema[10]>`

#65738E
#766C91
#785575
#523B58
#813B3D
#BC5E52
#E98D70

# Why didn't I tell anyone?

- It's *incredibly* niche
- The package didn't work with Instagram posts directly
- I discovered {paletteer} after I finished developing this
- {paletteer} does what cpcinema does:
  - color interpolation & printing
- {paletteer} *doesn't* take colors from cool Instagram posts!
- {paletteer} *does* actually integrate well with ggplot2
- {paletteer} integrates with prismatic



\*me to me\*  
the package can't do this!  
You knew this was needed!!



Xiaotong Yao 么晓彤 @xtYao · Mar 13

...

Replies to [@JosiahParry](#)

Love the idea! But the image link in the README is expired and in general how can I find such URLs from their IG posts?

# Thnx {httr}, {rvest} and Bard Coffee

Oh, and igram.io

iGram

## Instagram Downloader

Insert instagram link here

Download

Download Photos, Videos, IGTV & carousel



**Download Instagram Videos and Photos**

iGram is an online web tool to help you with downloading Instagram Photos, Videos and IGTV videos. iGram is designed to be easy to use on any device, such as, mobile, tablet or computer.



Soooo last night I was making slides

# I tried to remember how the package works

```
pal_from_post("https://www.instagram.com/p/CMC26FaHbqP/")
```

```
Error in download.file(fp, tmp, mode = "wb", quiet = TRUE) :  
cannot open URL 'NA'
```



# What's happening under the hood?

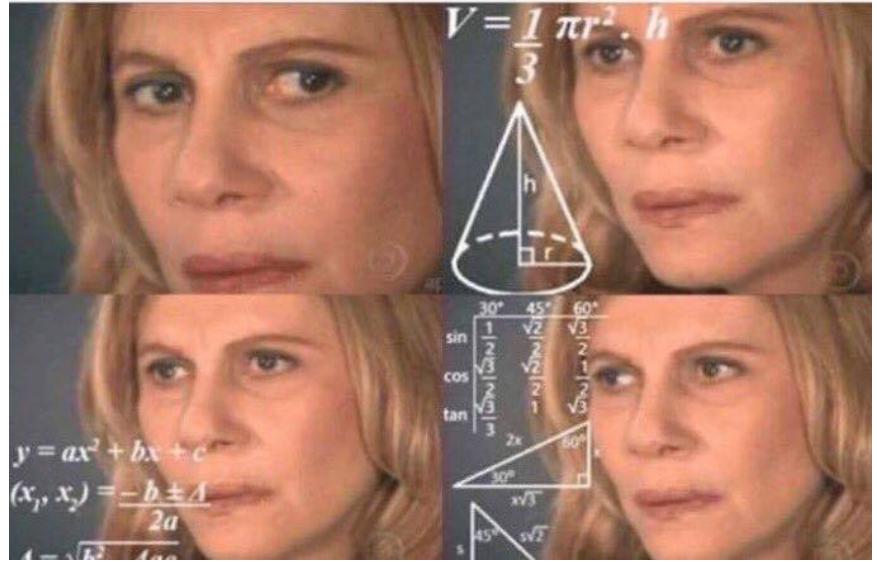
```
# print function body
pal_from_post
function(post_url) {
  res <- httr::POST("https://igram.io/api/",
                    body = list(url = post_url,
                                lang_code = "en",
                                vers = "2"),
                    encode = "form") %>%
  httr::content()

  imgs <- res%>%
    rvest::html_nodes(".py-2 img") %>%
    rvest::html_attr("src") %>%
    unique()

  img_paths <- imgs[2:length(imgs)]

  purrr::map(img_paths, extract_cpc_pal)
}

<bytecode: 0x7fa04b854a18>
<environment: namespace:cpcinema>
```



# This is what I get for web scraping the web scrapers

```
nonation <- "https://www.instagram.com/p/CNdEkV4HAXF"

res <- httr::POST("https://igram.io/api/",
                  body = list(url = nonation,
                              lang_code = "en",
                              vers = "2"),
                  encode = "form")
```

---

```
Response [https://igram.io/api/]
Date: 2021-04-26 22:46
Status: 403
Content-Type: text/html; charset=UTF-8
Size: 3.26 kB
<!DOCTYPE html>
<!--[if lt IE 7]> <html class="no-js ie6 oldie" lang="en-US"> <![endif]-->
<!--[if IE 7]>    <html class="no-js ie7 oldie" lang="en-US"> <![endif]-->
<!--[if IE 8]>    <html class="no-js ie8 oldie" lang="en-US"> <![endif]-->
<!--[if gt IE 8]><!--> <html class="no-js" lang="en-US"> <!--<![endif]-->
<head>
<title>Access denied | igram.io used Cloudflare to restrict access</title>
<meta charset="UTF-8" />
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8" />
<meta http-equiv="X-UA-Compatible" content="IE=Edge,chrome=1" />
...

```

Maybe it's just me.

# Maybe a different IP?

```
Response [https://igram.io/api/]
Date: 2021-04-26 22:43
Status: 503
Content-Type: text/html; charset=UTF-8
Size: 9.48 kB
<!DOCTYPE HTML>
<html lang="en-US">
<head>
  <meta charset="UTF-8" />
  <meta http-equiv="Content-Type" content="text/html; charset=UTF-8" />
  <meta http-equiv="X-UA-Compatible" content="IE=Edge,chrome=1" />
  <meta name="robots" content="noindex, nofollow" />
  <meta name="viewport" content="width=device-width,initial-scale=1" />
  <title>Just a moment...</title>
<style type="text/css">
```

I saw this coming

But then this morning!

“If it doesn’t work,  
try the same thing again  
until it does work”

- Me

## Instagram Downloader

Insert instagram link here

Download

Download Photos, Videos, IGTV & carousel



## Download Instagram **Videos** and **Photos**

iGram is an online web tool to help you with downloading Instagram Photos, Videos and IGTV videos. iGram is designed to be easy to use on any device, such as, mobile, tablet or computer.

Network tab open in developer tools showing a request to https://igram.io/i/

Request URL: <https://igram.io/i/>

Request Method: POST

Status Code: 200 (from service worker)

Referrer Policy: no-referrer-when-downgrade

Response Headers:

```
alt-svc: h3-27=:443; ma=86400, h3-28=:443; ma=86400, h3-29=:443; ma=86400
cf-cache-status: DYNAMIC
cf-ray: 6467f5e51a52555a-EWR
cf-request-id: 09b4d8032d0000555a0b88f000000001
content-encoding: br
content-type: text/html; charset=utf-8
date: Tue, 27 Apr 2021 12:12:48 GMT
expect-ct: max-age=604800, report-uri="https://report-uri.cloudflare.com/cdn-cgi/beacon/expect-ct"
nel: {"report_to": "cf-nel", "max_age": 604800}
referrer-policy: no-referrer-when-downgrade
report-to: {"group": "cf-nel", "endpoints": [{"url": "https://a.nel.cloudflare.com/report? s=QDDGnNv4KdFk0GSWw2qJHaN0jxuuf%2FR4xn9vUs2%2FZb%2FFh6wj rZmngEpsGK%2FNDeO Ppwj EY0dsvk AHyGRrom0pgcacSXegs7A77qt5pPpBHgyuFzQ%3D%3D"}], "max_age": 604800}
server: cloudflare
strict-transport-security: max-age=31536000; includeSubDomains
x-content-type-options: nosniff
```

# What's next

- They changed the API URL
- How *dare* they!
- Change the pal\_from\_post() API url
- Integrate with ggplot2 better!
- Better casting!
- Color sorting!

**THANK YOU  
FOR COMING  
TO MY TED TALK**