

ZERO LINES OF CODE\* + A DOZEN HEADACHES  
=

ONE STICKER PACK APP

At the start of the Covid stay-at-home break, I unsuccessfully tried to get my 12-year-old daughter interested in coding.

Instead, we discovered the Apple iMessage Sticker Pack ecosystem where we can use our creativity and zero coding to publish to the App Store.

But despite no code, there were still plenty of headaches to overcome.

This presentation addresses those challenges and their solutions, as well as a demo showing how quickly a new sticker pack can be published.

**Dan King**  
Viewpoint Technical LLC

**Zero Lines of Code  
+ 12 Headaches  
= One Sticker Pack App**

Powered by **zoom**  
zoom.us **Online Workshop**

This presentation and all examples can be found at [www.vptech.io](http://www.vptech.io)

Contact me at [dan.king@vptech.io](mailto:dan.king@vptech.io)

# OVERVIEW

- Background story: Wanting to teach my 12-year-old daughter coding during the Covid-19 stay-at-home break.
- Headaches encountered: Despite 0 lines of code\* required to develop a sticker pack there are at least a dozen challenges to overcome along the way. (\*Although no coding was required in Xcode I did write some JavaScript to help with the grunt work.)
- This presentation will cover some of those challenges and the solutions found to overcome them.
- Demo: In this presentation I will create and submit an "I Love San Diego" sticker pack and submit it to the App Store in under 30 minutes!

# CONTENTS

- Headache #1 Finding the motivation to get the job done
- Headache #2: Sourcing images
- Headache #3 Pitfalls of using Creative Commons media
- Headache #4 Automating Creative Commons attribution
- Headache #5 Certificate and development issues
- Headache #6 Sticker pack name already in use
- Headache #7 Creating unique content
- Headache #8 Automating grunt work
- Headache #9 Dealing with App Store rejection
- Headache #10 The politics of money
- Heartache #11 The money of politics
- Headache #12 Sales and profit
- Demo
- Resources
- Sticker Packs
- Thank You



## I Love San Francisco 4+

Sticker Pack of SF Landmarks

[Viewpoint Technical LLC](#)

★★★★★ 5.0 • 4 Ratings

Free  
Only for iMessage



## StickerPack Black Lives Matter 12+

Black Lives Matter StickerPack

[Viewpoint Technical LLC](#)

★★★★★ 5.0 • 1 Rating

Free  
Only for iMessage



## Biden Harris 2020 4+

Support Joe and Kamala in 2020

[Viewpoint Technical LLC](#)

#29 in Celebrities  
★★★★★ 5.0 • 2 Ratings

\$0.99  
Only for iMessage



## I Love LA Sticker Pack 4+

Stickers of loved LA landmarks

[Viewpoint Technical LLC](#)

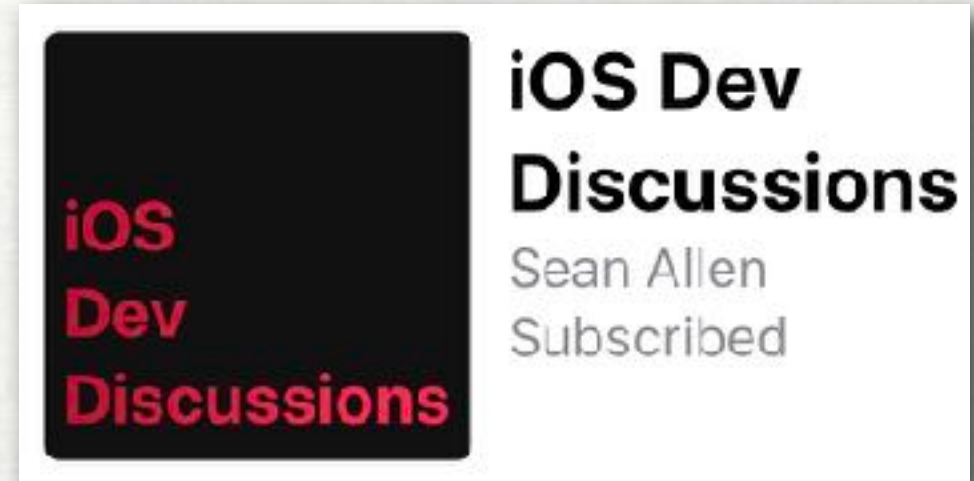
★★★★★ 5.0 • 2 Ratings

\$0.99  
Only for iMessage

# HEADACHE #1

## FINDING THE MOTIVATION TO GET THE JOB DONE

- How to motivate the motivator when it is nobody's job but mine?
- Why does a 30-minute task sometimes take 2 months?
- Solution:
  - Repeat this mantra: "It's okay if it's not perfect."
  - Inspiration from Sean Allen, "iOS Dev Discussions" podcast:
    - "If you are happy with version 1 of your product then you spent too long getting it to market."



# HEADACHE #2

## SOURCING IMAGES

- Vacation photos only go so far in providing content for my sticker packs.
- Solution: Wikimedia Creative Commons provides an opportunity, but with some caveats.

# HEADACHE #3

## PITFALLS OF USING CREATIVE COMMONS MEDIA

- Re-use of Create Commons media requires specific rules.
- Solution: Know the license types.



# LICENSE TYPES: MOST TO LEAST PERMISSIVE

[HTTPS://CREATIVECOMMONS.ORG/ABOUT/CCLICENSES/](https://creativecommons.org/about/ccllicenses/)

1. Own Work

2.  Public Domain

3.  CC BY: Attribution required

4.  CC BY-SA: Attribution and share alike - distribute under same license

5.  CC BY-NC: Attribution but no commercial use

6.  CC BY-NC-SA: Attribution, share alike, no commercial use

7.  CC BY-ND: Attribution, no derivatives

8.  CC BY-NC-ND: Attribution, no commercial use, no derivatives

9. All Other Work

# HEADACHE #4

## AUTOMATING CREATIVE COMMONS ATTRIBUTION

- Most Creative Commons images used in my stickers pack requires attribution and re-license under the same terms.
- Solution: Create a web page dedicated to licenses and attribution. Include message and link in the App Store app description.

# Sticker Pack License

These sticker pack images are licensed under the [Creative Commons Attribution-ShareAlike 4.0 International \(CC BY-SA 4.0\)](#) license.

You are free:

- to share – to copy, distribute and transmit the work
- to remix – to adapt the work

Under the following conditions:

- **attribution** – You must give appropriate credit, provide a link to the license, and indicate if changes were made. You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use.
- **share alike** – If you remix, transform, or build upon the material, you must distribute your contributions under the same or compatible license as the original.


Image Name	Image	Copyright
Oakland BLM Horseback		Original work © Copyright 2020 <a href="#">Daniel Arauz</a> <a href="https://en.wikipedia.org/wiki/File:2020-05-29_GeorgeFloyd-BlackLivesMatter-Protest-in-Oakland-California_175_(49951925926).jpg">https://en.wikipedia.org/wiki/File:2020-05-29_GeorgeFloyd-BlackLivesMatter-Protest-in-Oakland-California_175_(49951925926).jpg</a>  Modified work © Copyright 2020 Viewpoint Technical LLC
Black Lives Matter Rock		Original work © Copyright 2020 <a href="#">Dale Cruse</a> <a href="https://en.wikipedia.org/wiki/File:Black_Lives_Matter_(50007395296).jpg">https://en.wikipedia.org/wiki/File:Black_Lives_Matter_(50007395296).jpg</a>  Modified work © Copyright 2020 Viewpoint Technical LLC
Oakland Black Lives Matter Mural		Original work © Copyright 2020 <a href="#">Daniel Arauz</a> <a href="https://en.wikipedia.org/wiki/File:2020-06-07-Oakland-BlackLivesMatter-Murals_41_(49983717636).jpg">https://en.wikipedia.org/wiki/File:2020-06-07-Oakland-BlackLivesMatter-Murals_41_(49983717636).jpg</a>  Modified work © Copyright 2020 Viewpoint Technical LLC



# HEADACHE #5

## CERTIFICATE AND DEVELOPMENT ISSUES

- Problems configuring developer certificate.
- Problems running the simulator.
- Solutions:
  - StackOverflow
  - New computer

Missing private key:

 "Viewpoint Technical LLC" has one Apple Distribution certificate but its private key is not installed.  
Contact the creator of this certificate to get a copy of the private key.

Certificate	Creator	Email
 Created 5/22/20	Daniel King	dan.king@vptech.io 

# HEADACHE #6

## STICKER PACK NAME ALREADY IN USE

- What to do when the sticker pack name that I want is already in use?
- Solution: different combination of words

**New App**

There are one or more validation errors below.

Platforms ?  
 iOS  macOS  tvOS

Name ?  
I Love LA

The app name you entered is already being used. If you have trademark rights to this name and would like it released for your use, submit a claim.

I Love LA - io.vptech.I-Love-LA

SKU ?  
ilovelastickerpack

User Access ?  
 Limited Access  Full Access

Cancel Create

**New App**

There are one or more validation errors below.

Platforms ?  
 iOS  macOS  tvOS

Name ?  
I Love LA Sticker Pack

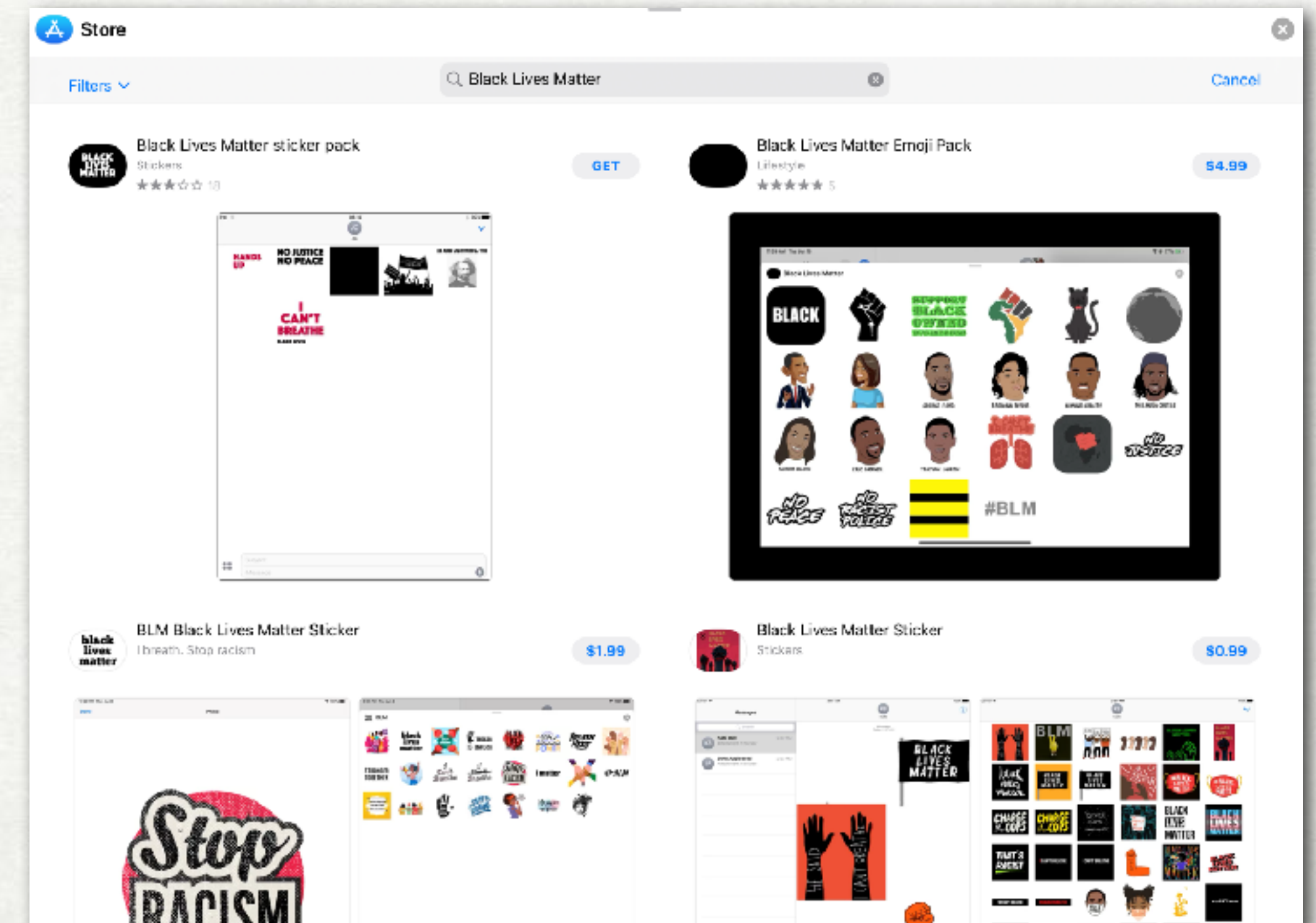
Primary Language ?  
English (U.S.)

Bundle ID ?  
I Love LA - io.vptech.I-Love-LA

SKU ?  
ilovelastickerpack

User Access ?  
 Limited Access  Full Access

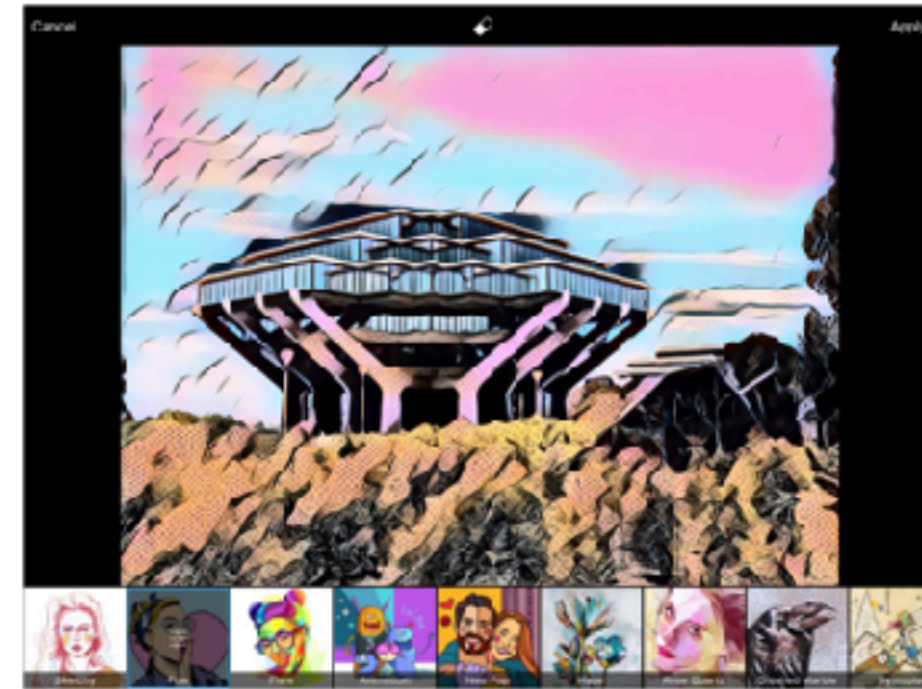
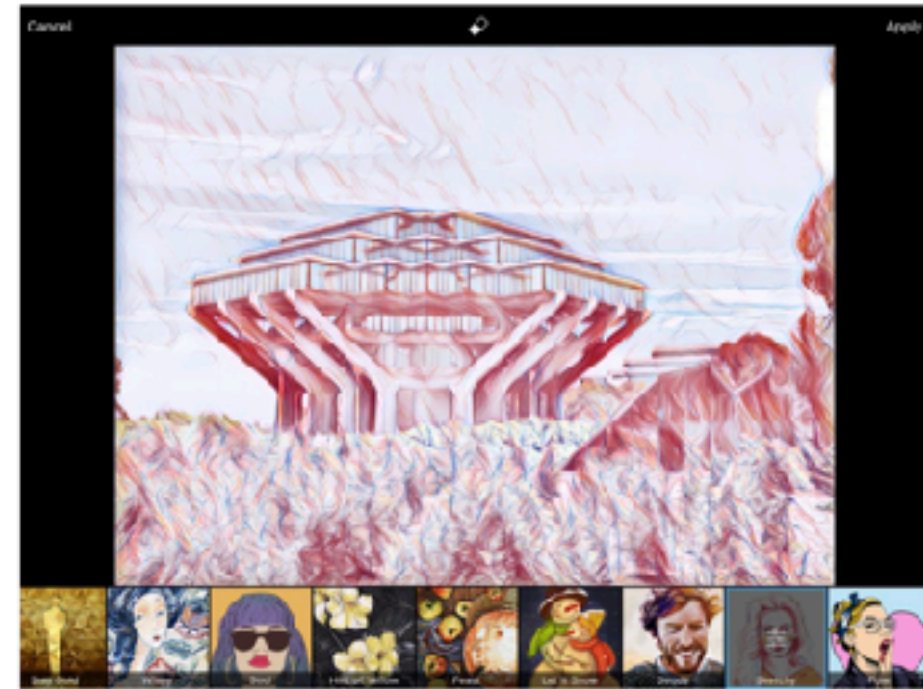
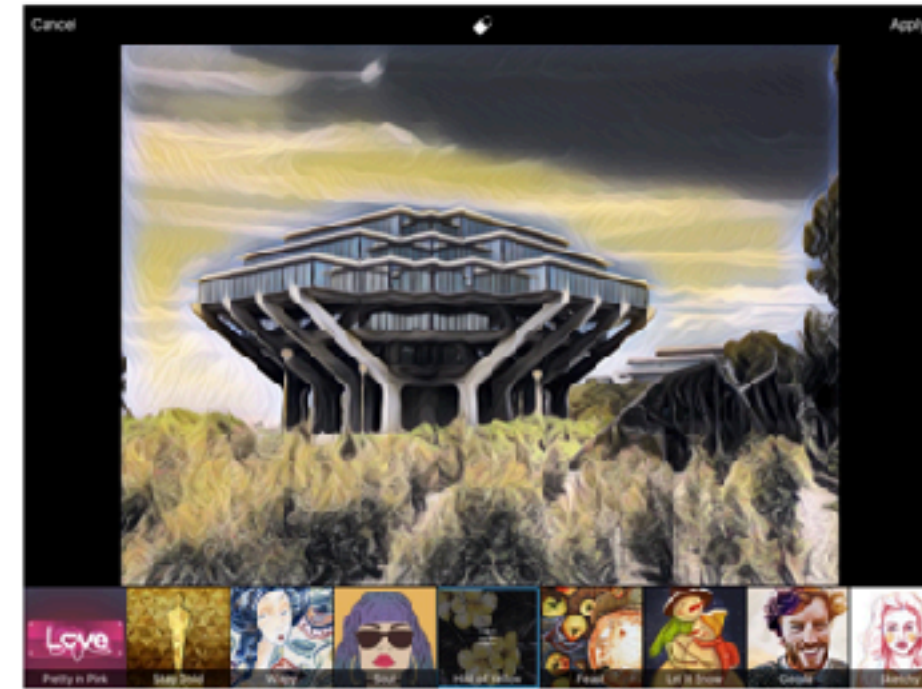
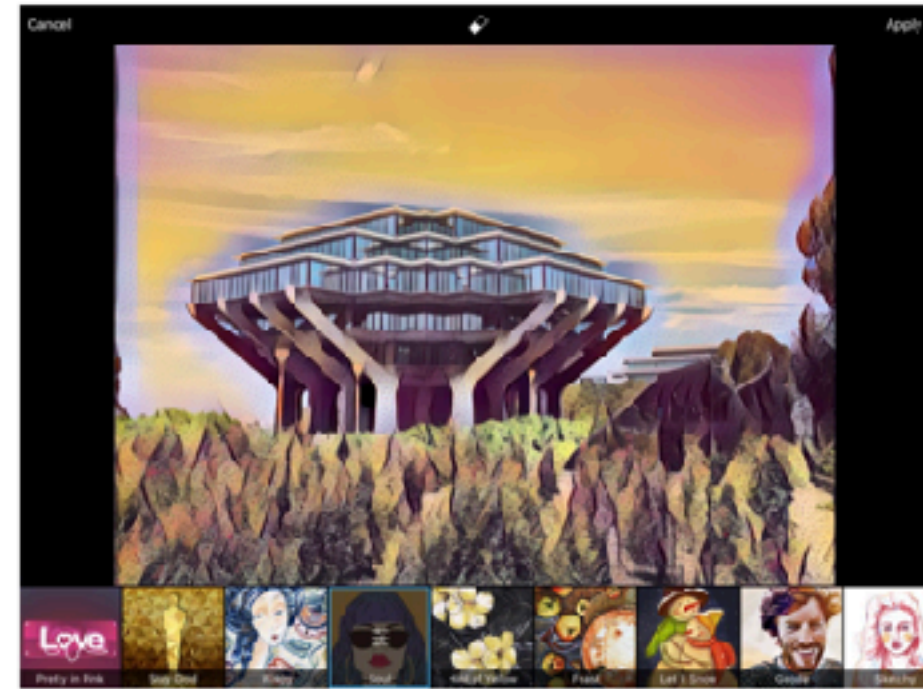
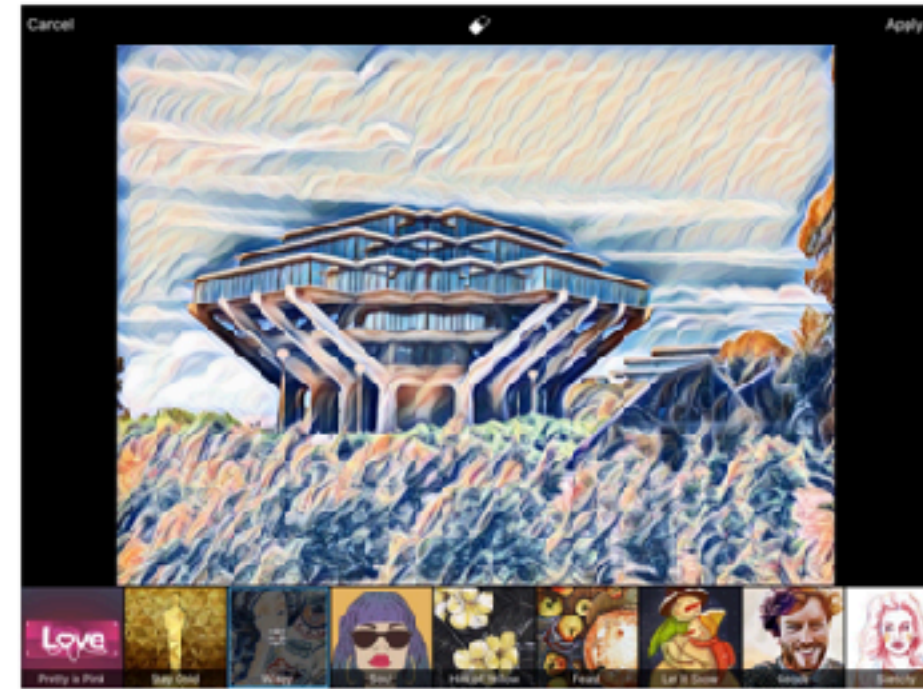
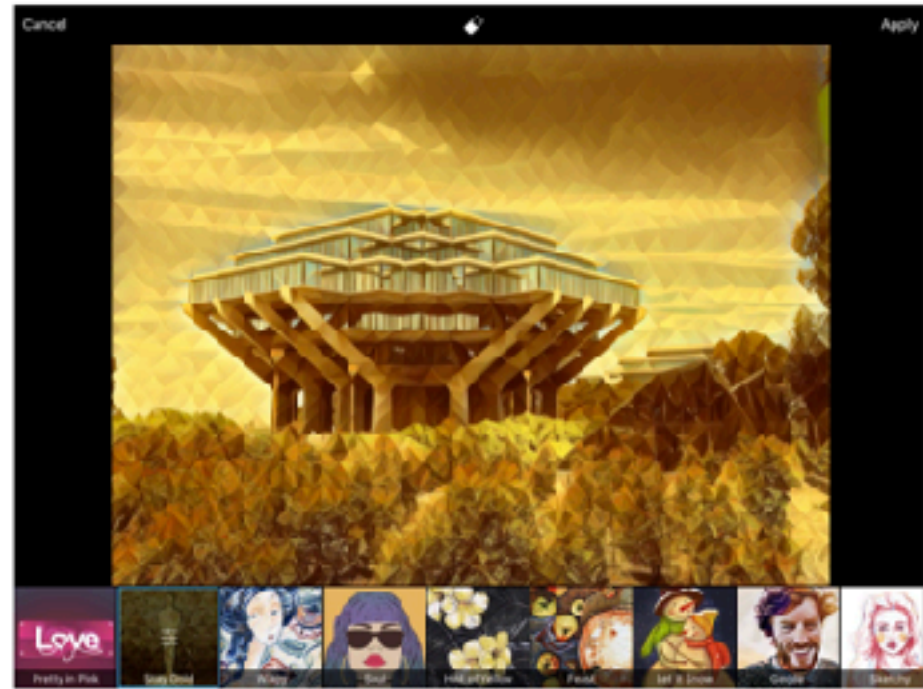
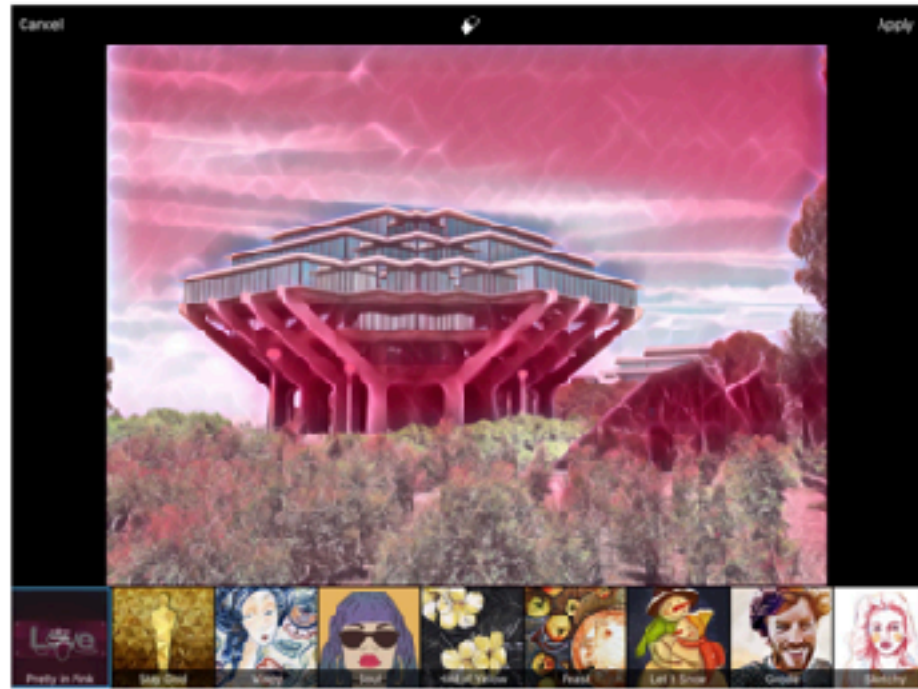
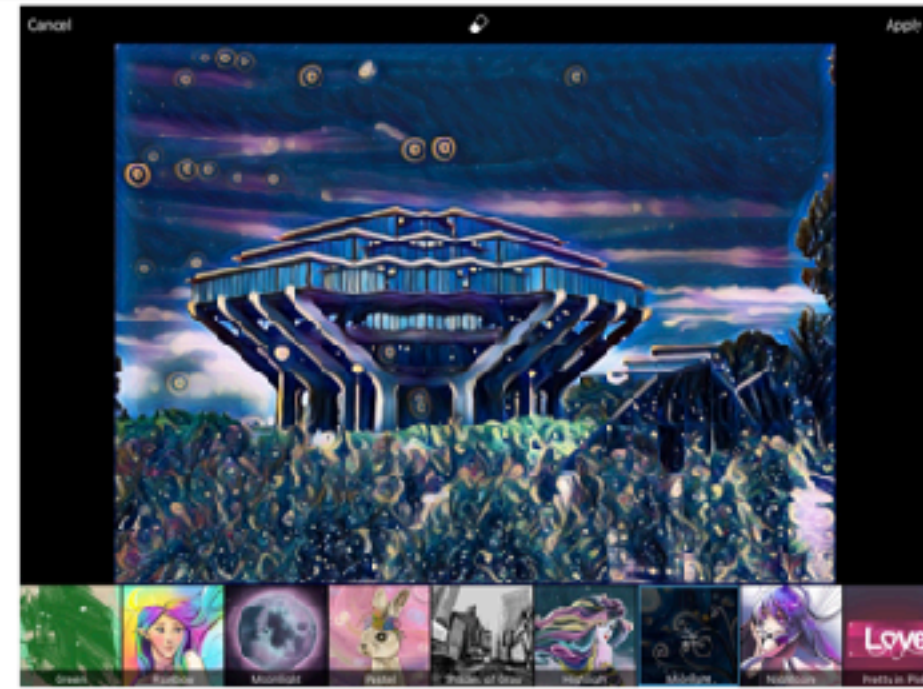
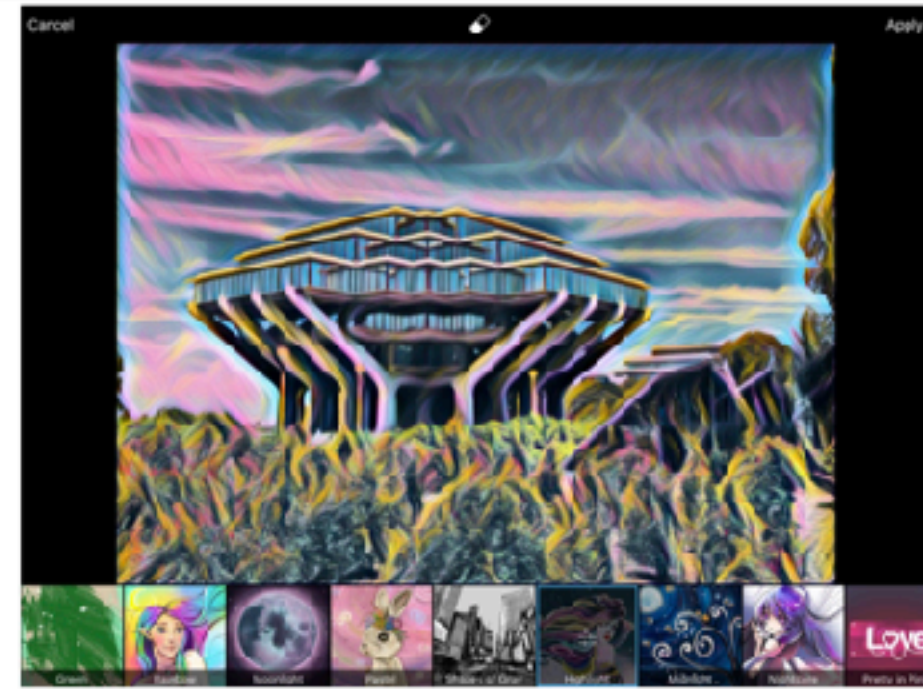
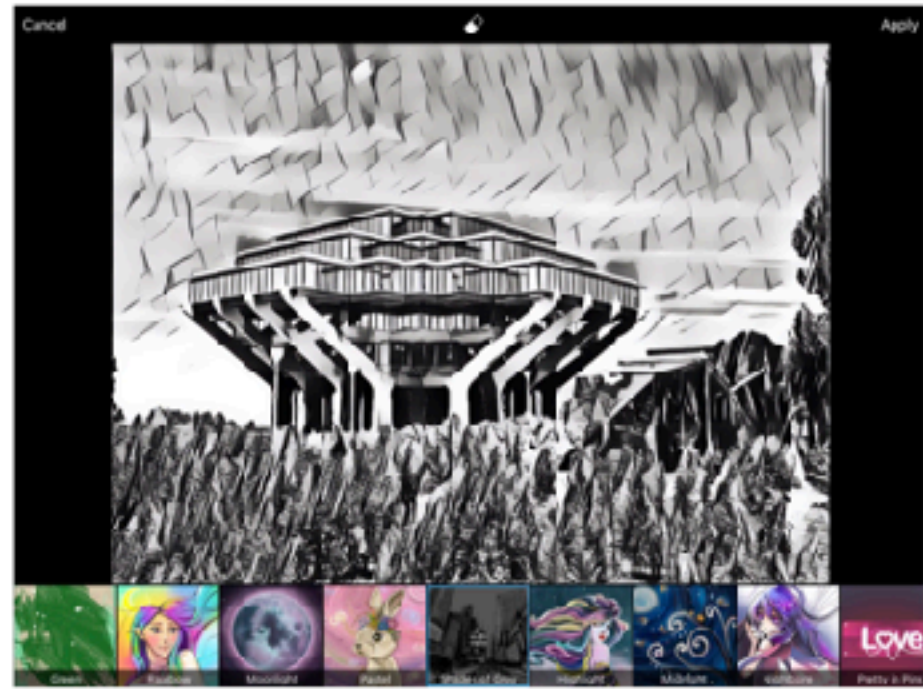
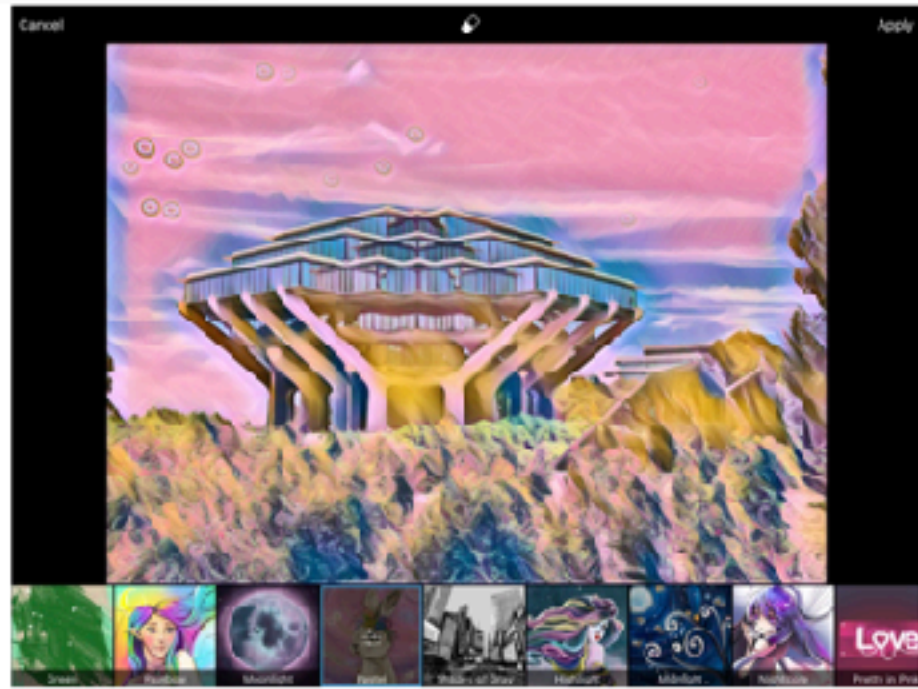
Cancel Create



# HEADACHE #7

## CREATING UNIQUE CONTENT

- What to do when the market already has a sticker pack with the same content?
- This solution is actually not a headache at all, it is the funnest part of the project.
- Solution: Take some images and add some bling.



# THEIRS VS. MINE

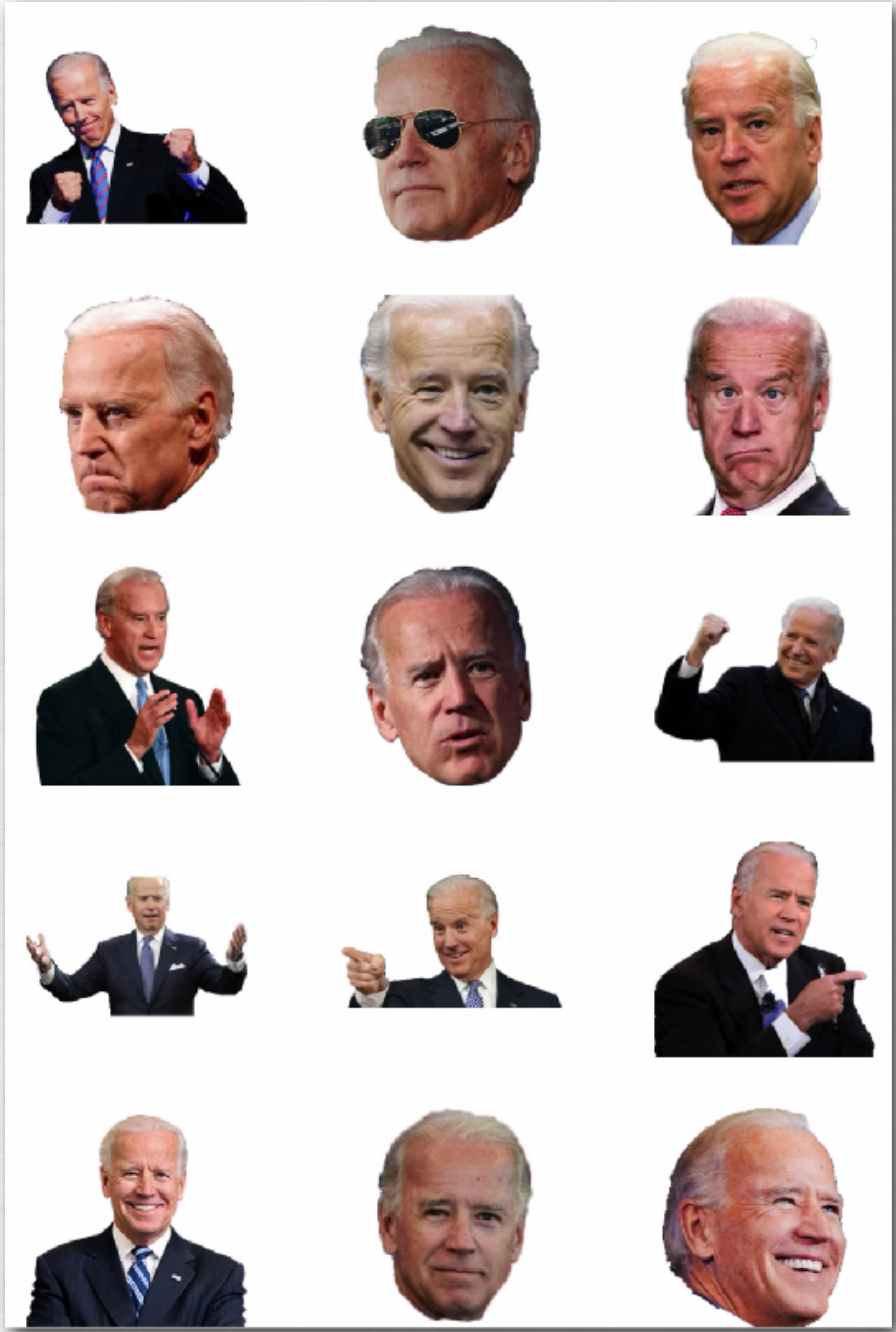




# THEIRS VS. MINE



# THEIRS VS. MINE



# HEADACHE #8

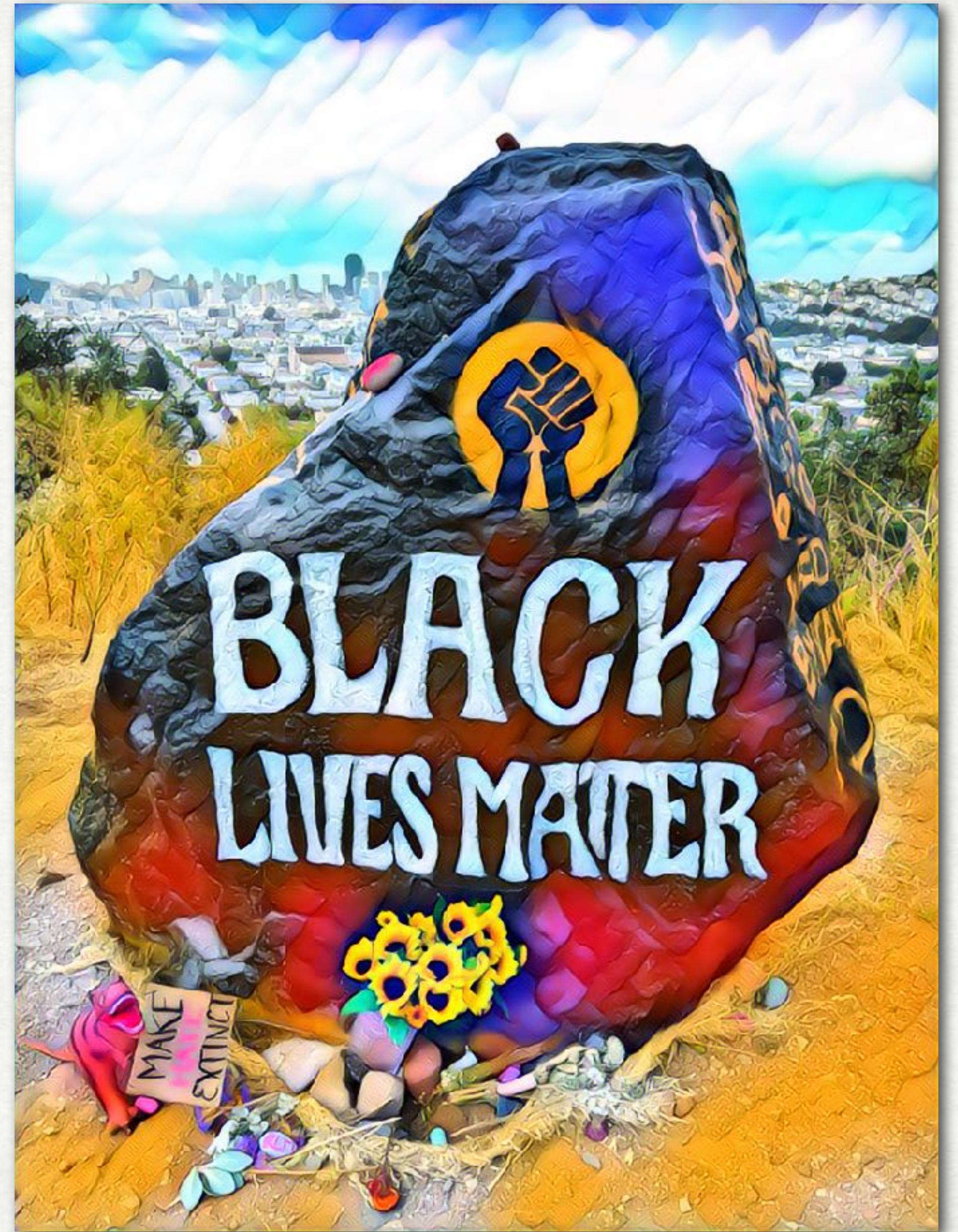
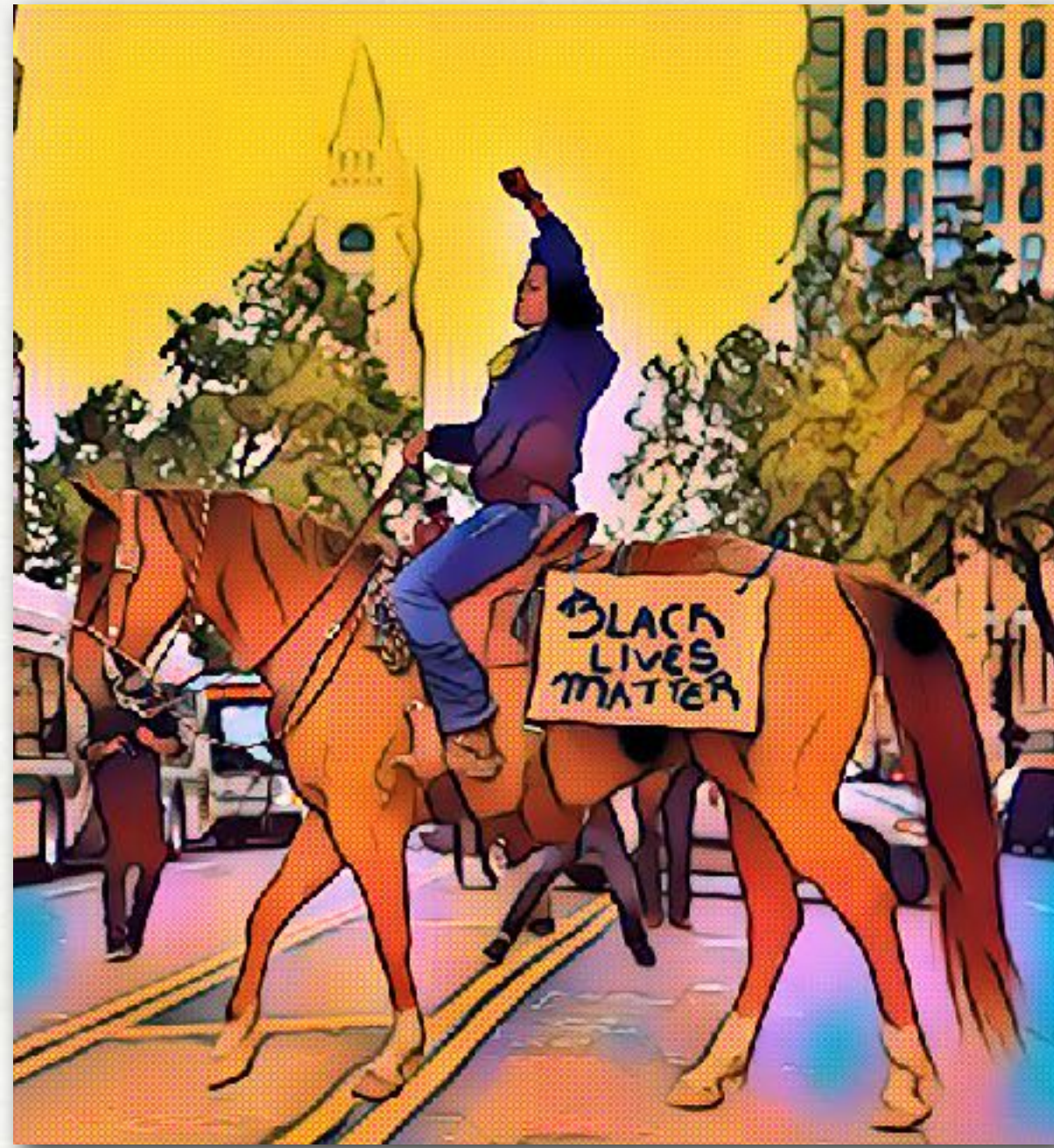
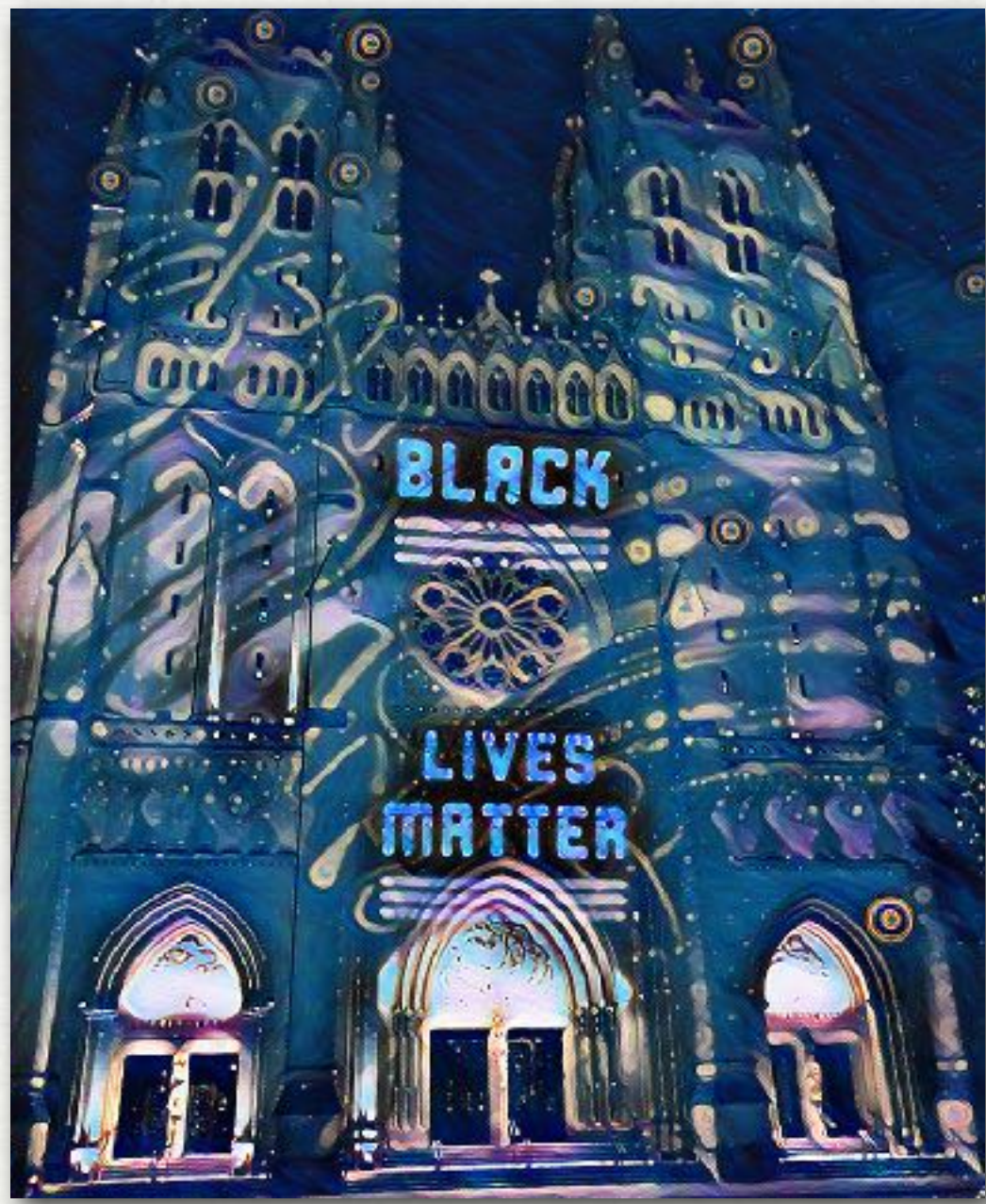
## AUTOMATING GRUNT WORK

- Despite 0 lines of code needed to create the Sticker Pack, some code was required to handle some of the grunt work.
- Solution: Photoshop JSX
- A PhotoShop JSX script is used to create image overlays.
- A PhotoShop JSX script is used to generate app icons.

# HEADACHE #9

## DEALING WITH REJECTION

- Apple rejected my “Black Lives Matter” sticker pack 3 times.
- Reason: Some may find the content objectionable.
- No other details were provided.
- Solution: After trial and error I figured out the objectionable content.
- Solution: Understand the guidelines.
  - <https://developer.apple.com/app-store/review/guidelines/>



# HEADACHE #10

## THE POLITICS OF MONEY

- When would making content free for all be the right choice?
- When would selling content be the sensible business decision?
- Solution:
  - Free Apps
    - I Love San Francisco
    - Black Lives Matter
    - I Love San Diego
  - Paid/Freemium Apps
    - Biden Harris 2020
    - I Love LA
    - Everything Else

# HEADACHE #11

## THE MONEY OF POLITICS

- Should I make money from my friends or from my foes?
- Solution:
  - \$0.99 Biden Harris 2020 - now
  - \$999.99 Trump - maybe later

# HEADACHE #12

## SALES AND PROFIT

- A \$0.99 sale of a sticker pack generates \$0.70 of revenue.
- After revenue-sharing with my 12-year-old daughter I earn \$0.35 per sale.
- 283 sales will cover the \$99 cost of the iOS Developer program.
- 14,283 sales will cover the \$4999 cost of my recent iMac purchase.
- Solution: Throw it on the wall and see what sticks.



# STICKER PACK DEMO

## CREATING "I LOVE SAN DIEGO" STICKER PACK

- Demo of creating and submitting a new Sticker Pack
- Start with a blank Xcode project
- Finish with a Sticker Pack submitted to the App Store
- Goal: Complete task in under 1 hour!

# RESOURCES

- **This presentation on my homepage**
  - <https://vpotech.io/>
- **Creative Commons**
  - <https://creativecommons.org/licenses/>
- **Wikimedia Commons**
  - <https://commons.wikimedia.org/>
- **PicsArt Photo & Video Editor**
  - <https://apps.apple.com/us/app/picsart-photo-video-editor/id587366035>
- **PhotoShop JSX Reference**
  - <https://www.adobe.com/devnet/photoshop/scripting.html>
- **Photoshop JSX image processing scripts on GitHub**
  - <https://github.com/dan-king/iMessage-Sticker-Pack-Photoshop-jsx>
- **San Diego iOS Developers Meetup**
  - <https://www.meetup.com/sdiosdevelopers/events/274096826/>

# STICKER PACKS

- **I Love San Francisco**

- <https://apps.apple.com/us/app/i-love-san-francisco/id1507523584>

- **StickerPack Black Lives Matter**

- <https://apps.apple.com/us/app/stickerpack-black-lives-matter/id1524707271>

- **Biden Harris 2020**

- <https://apps.apple.com/us/app/biden-harris-2020/id1534510260>

- **I Love LA Sticker Pack**

- <https://apps.apple.com/us/app/i-love-la-sticker-pack/id1536875437>

# THANK YOU

- Thank you Apple for the developer ecosystem.
- Thank you Wikimedia for enabling the Creative Commons ecosystem.
- Thank you Ray Fix and Jeff Ruton for your generous contribution of time and energy fostering a thriving iOS community in San Diego and beyond.
- Thank you San Diego CyberTECH iOS User Group for your presence and participation.