

API BASED THEMING OF MOBILE APPS

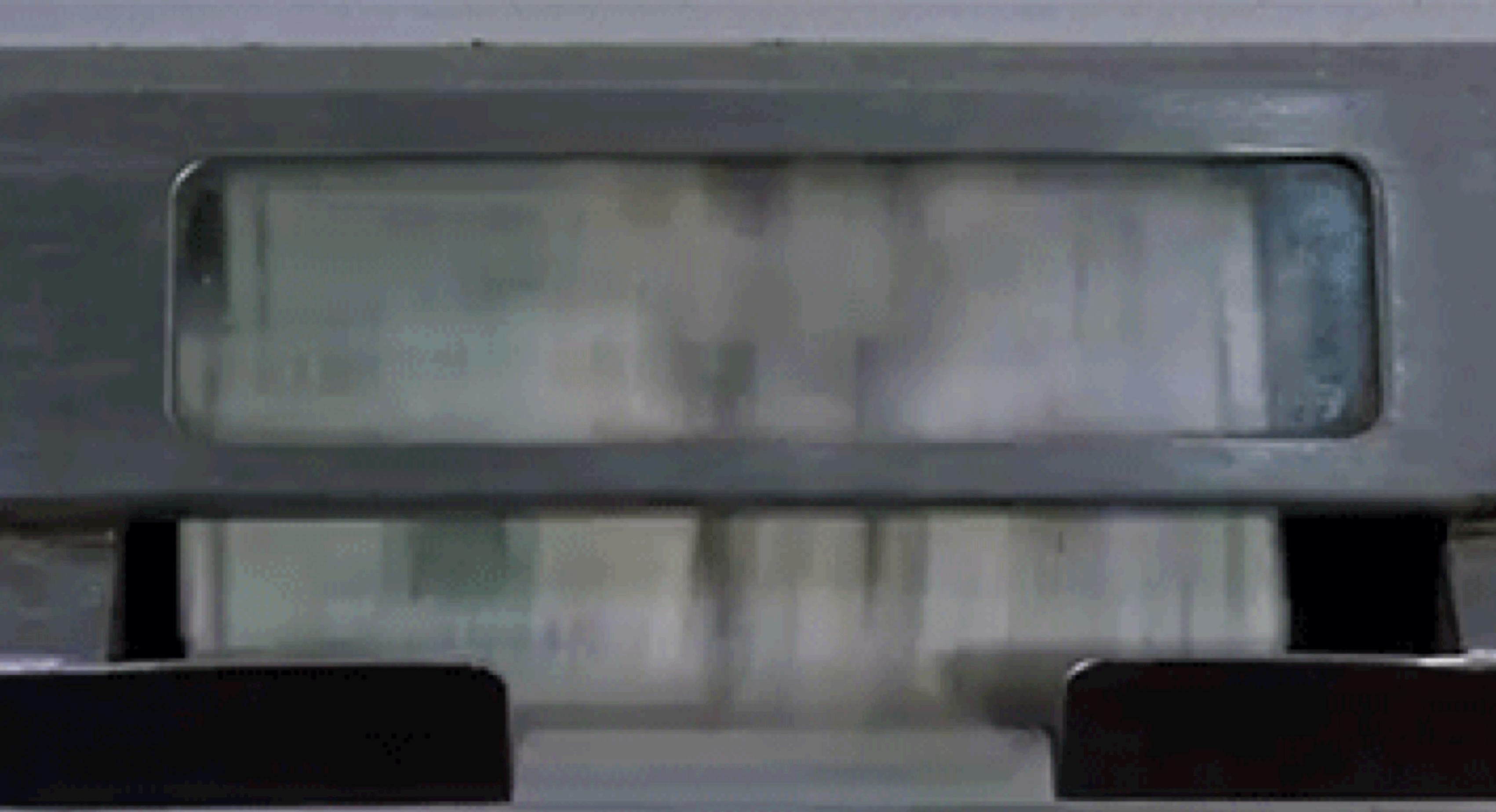
BY ROBERT TOLAR HAINING

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PayPal Commerce

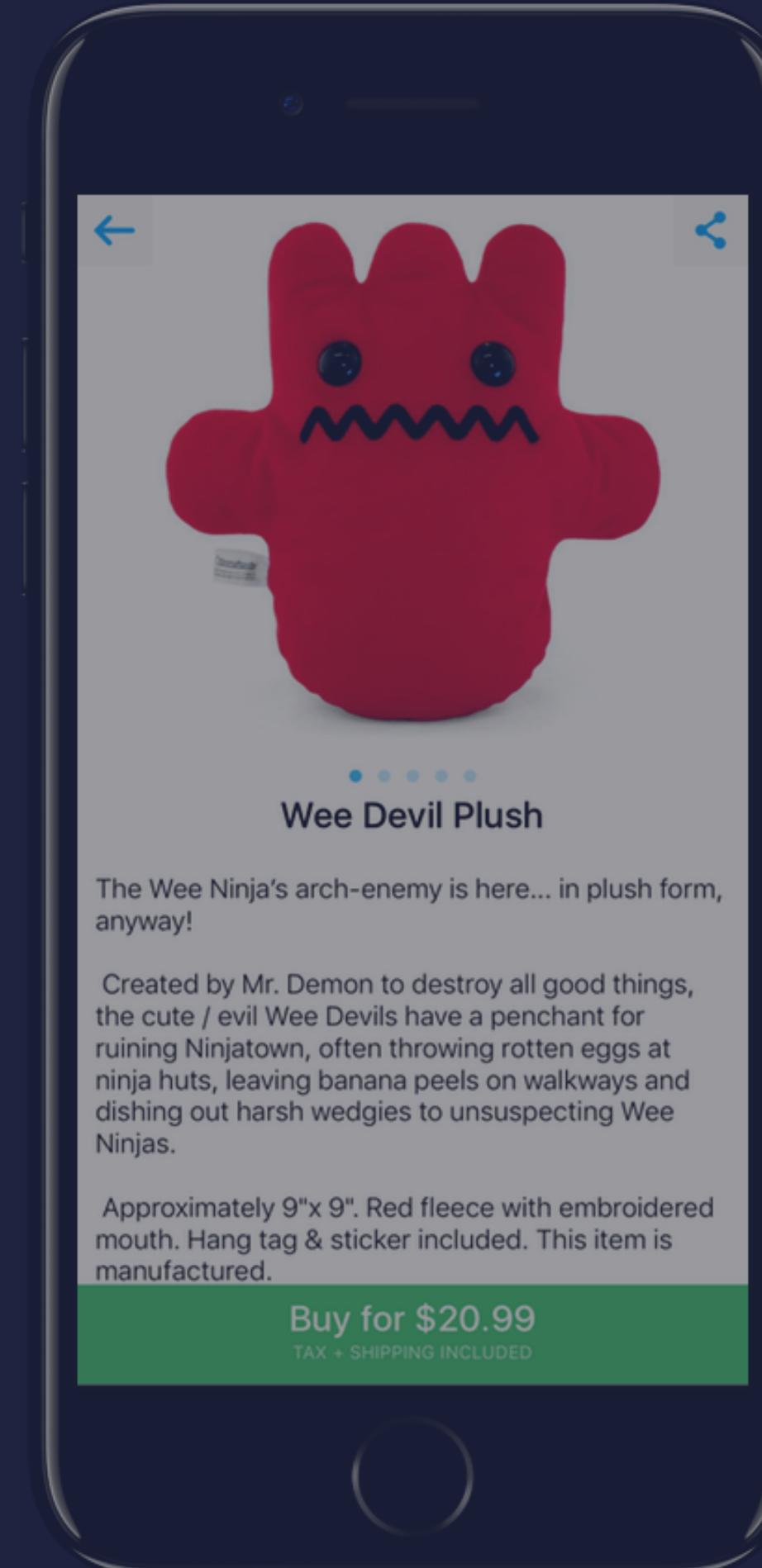
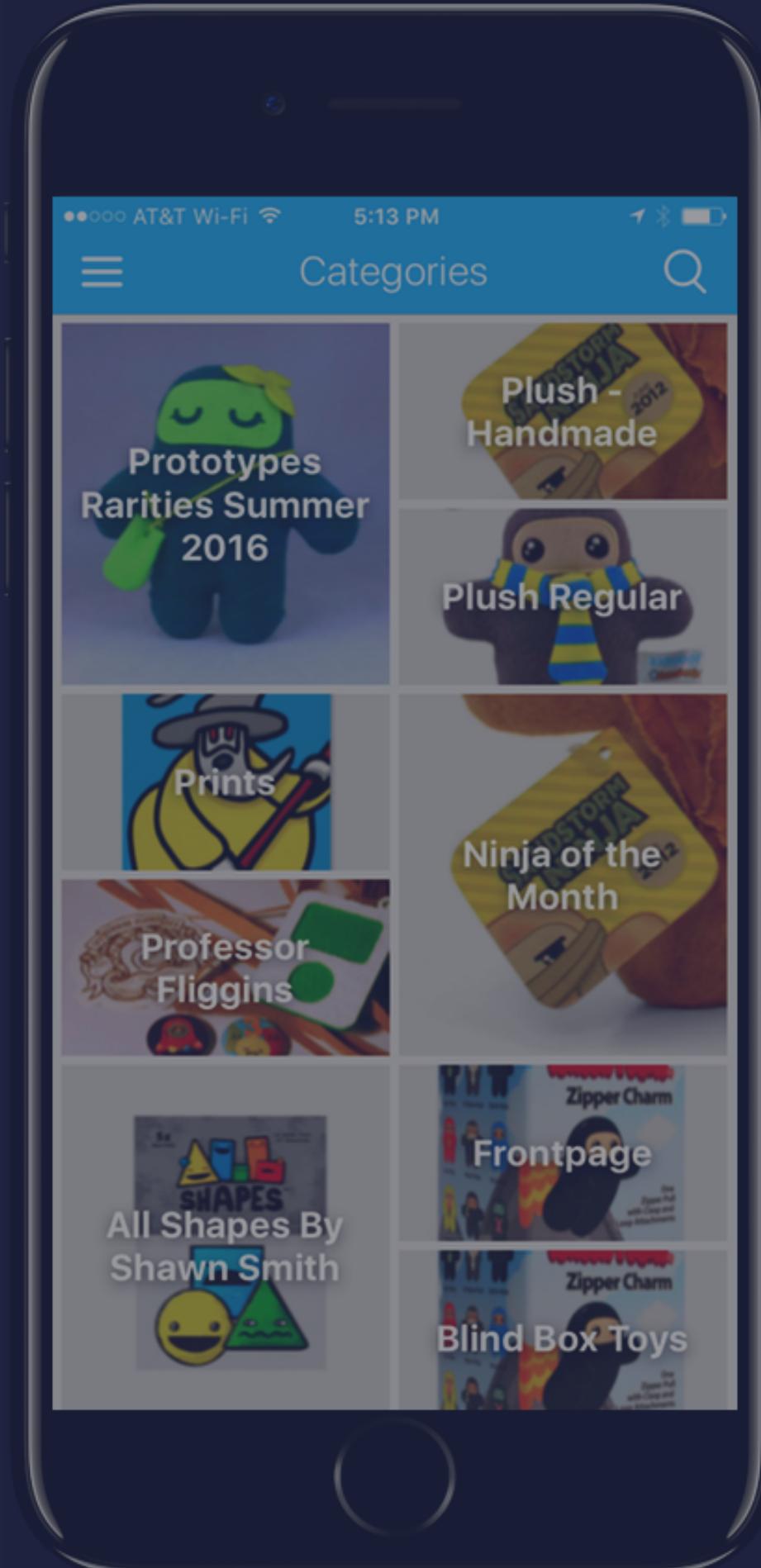
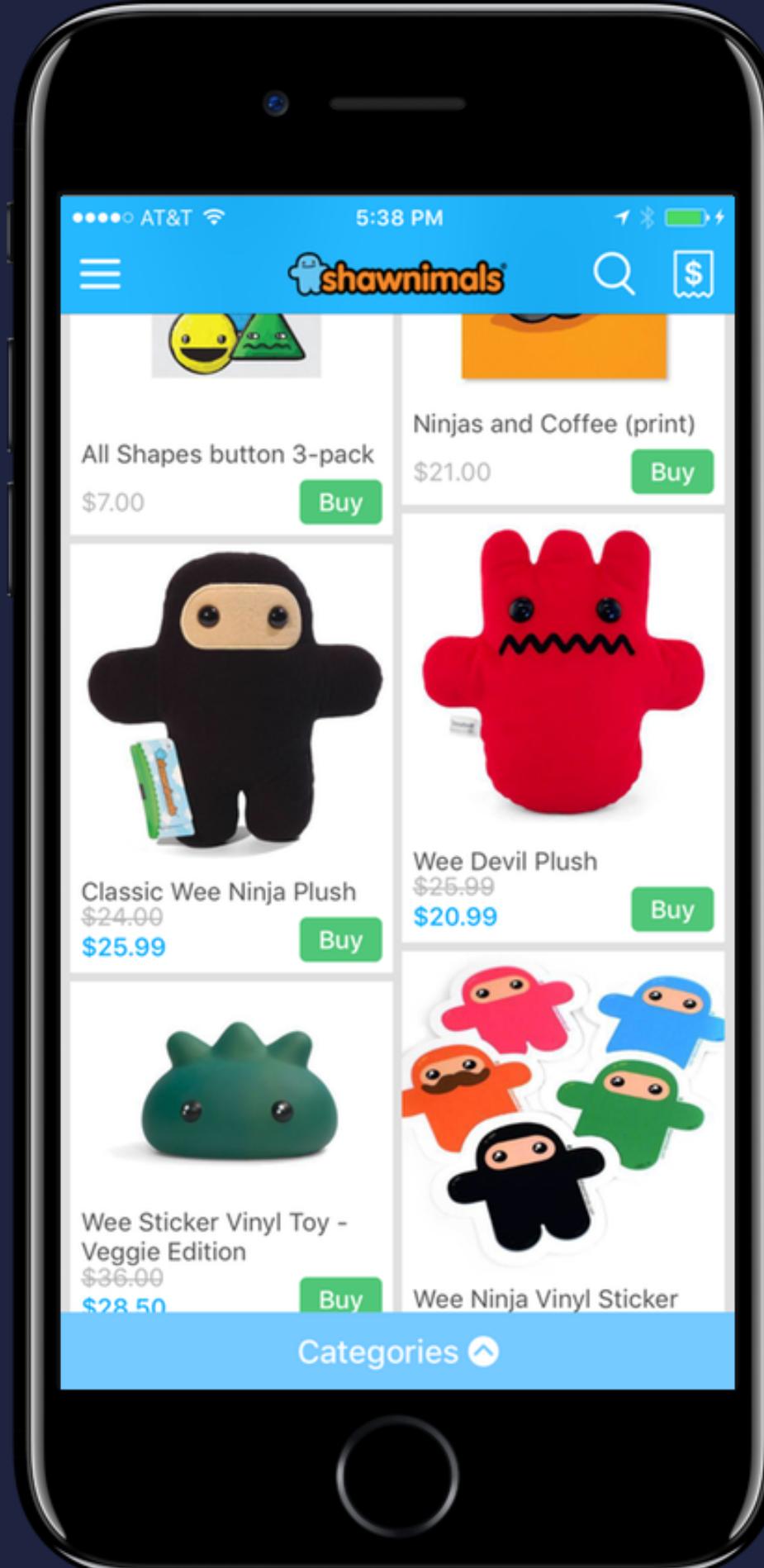
Braintree
A *PayPal* Company

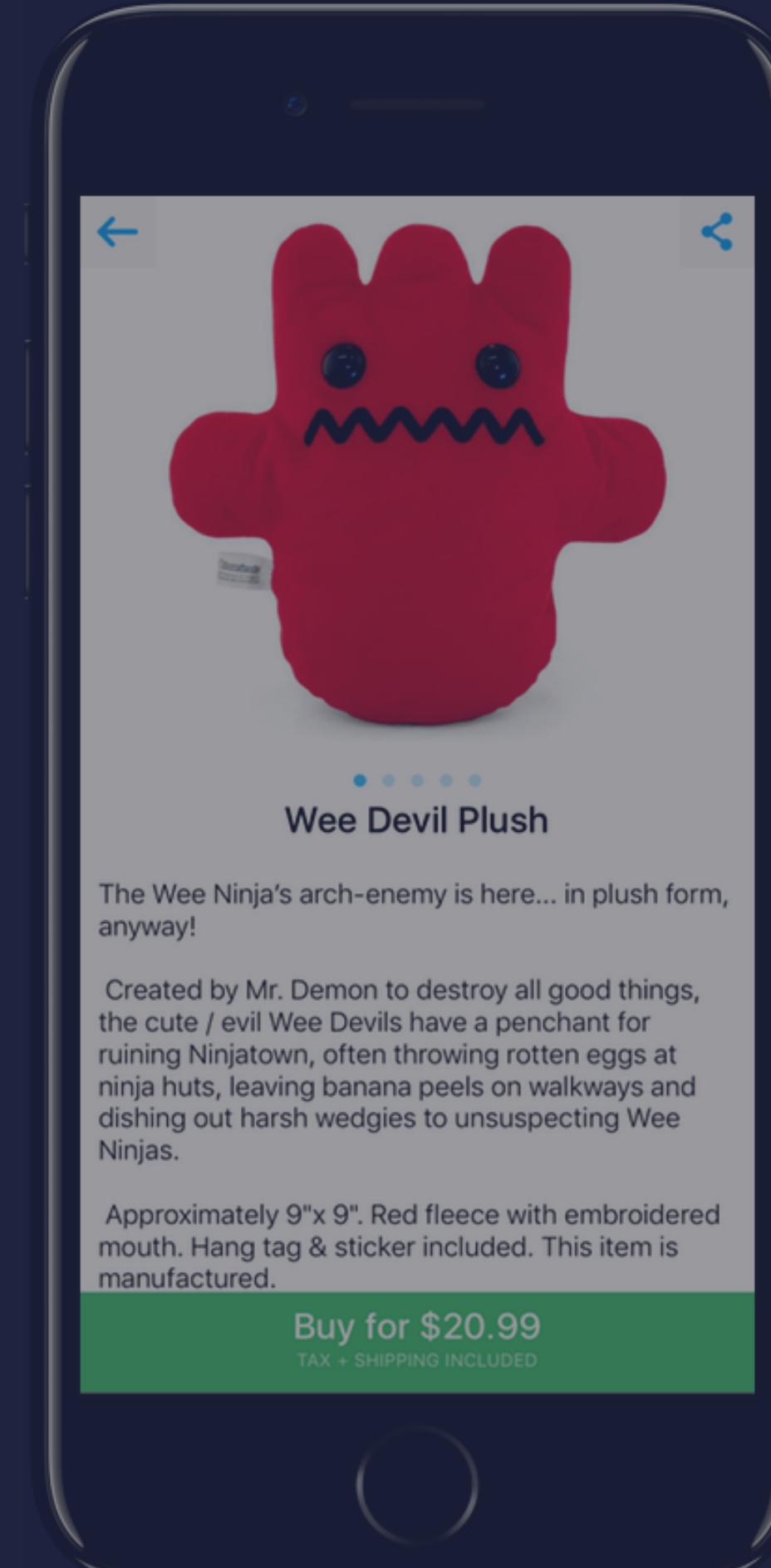
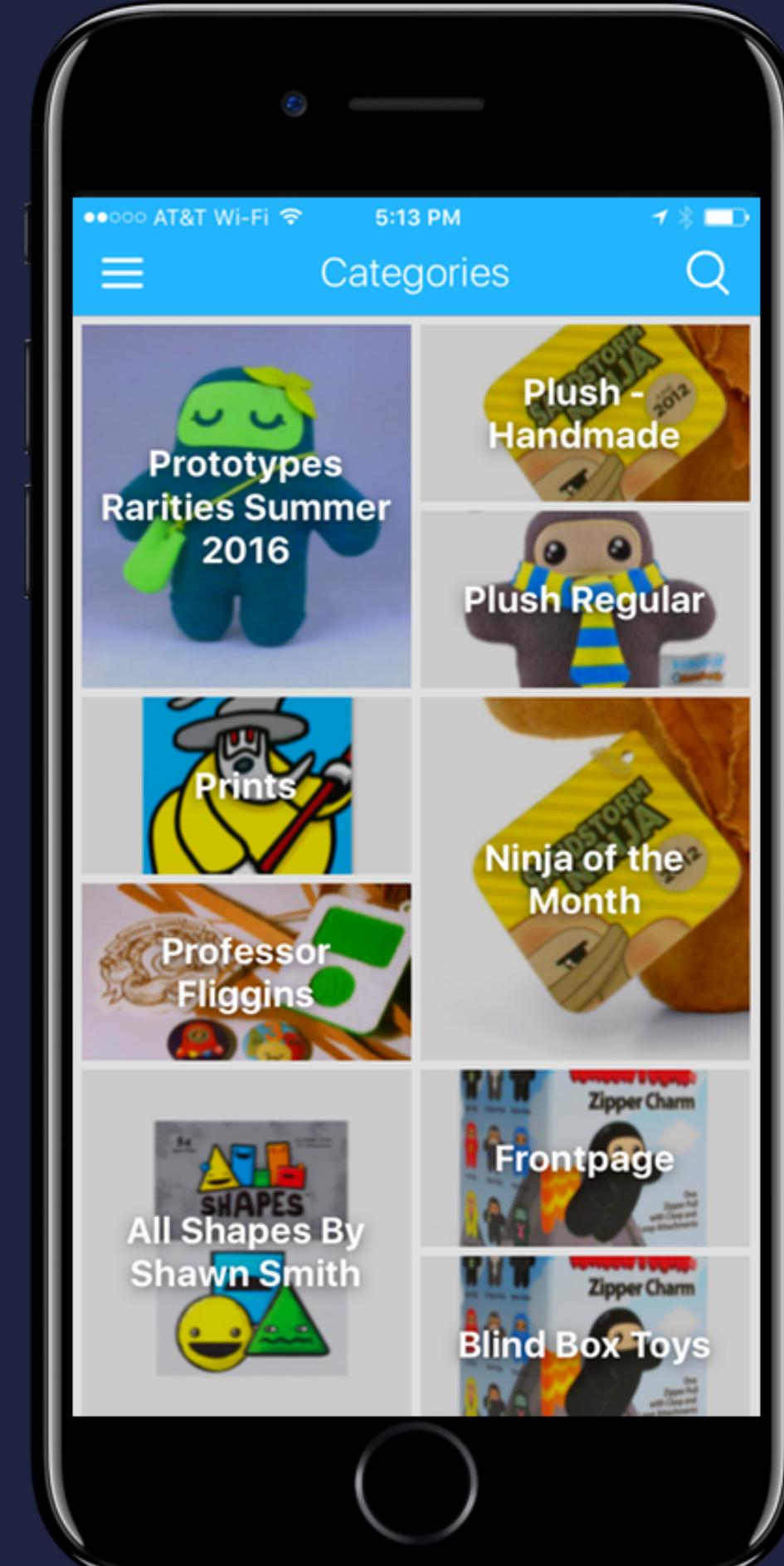
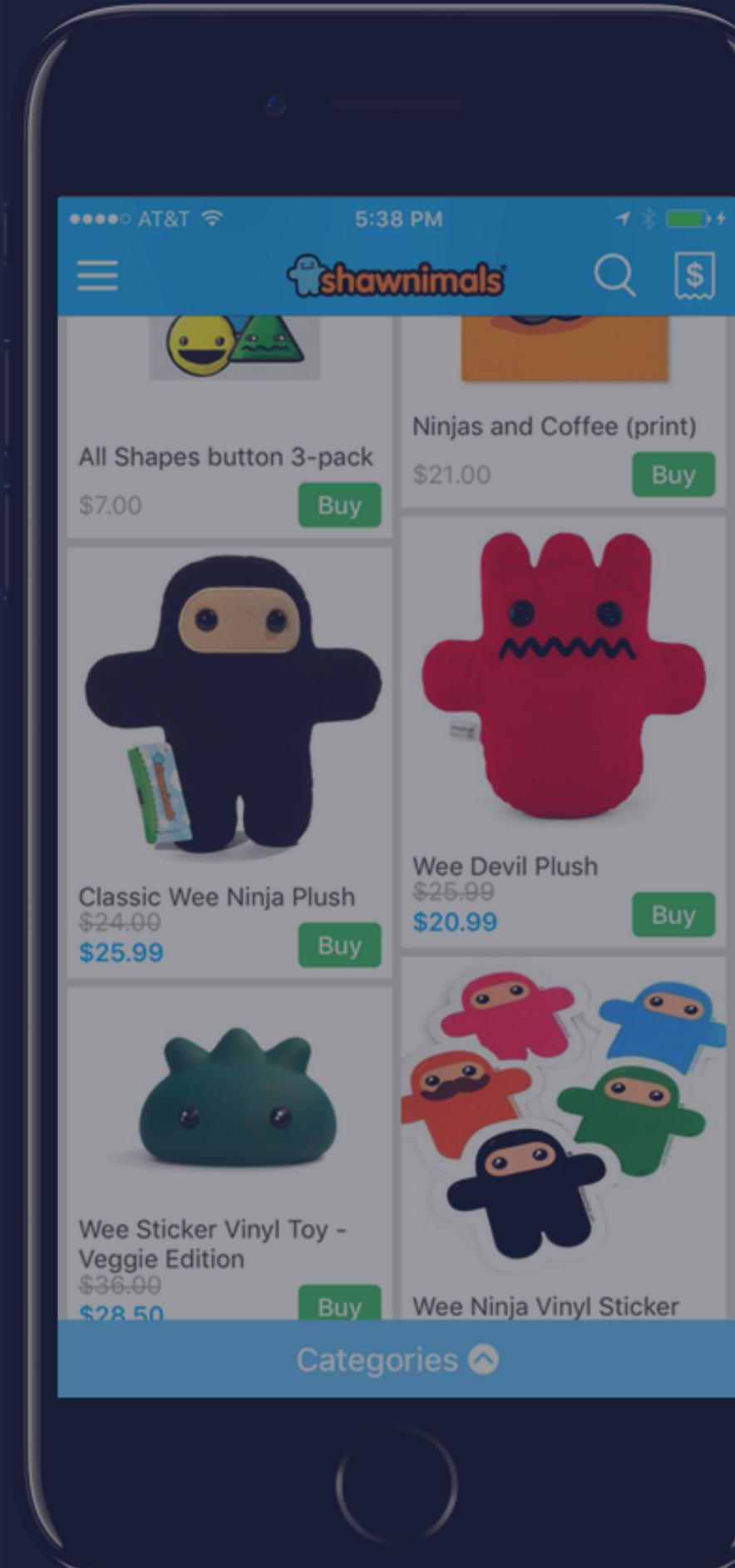
**CONTEXTUAL
COMMERCIAL**

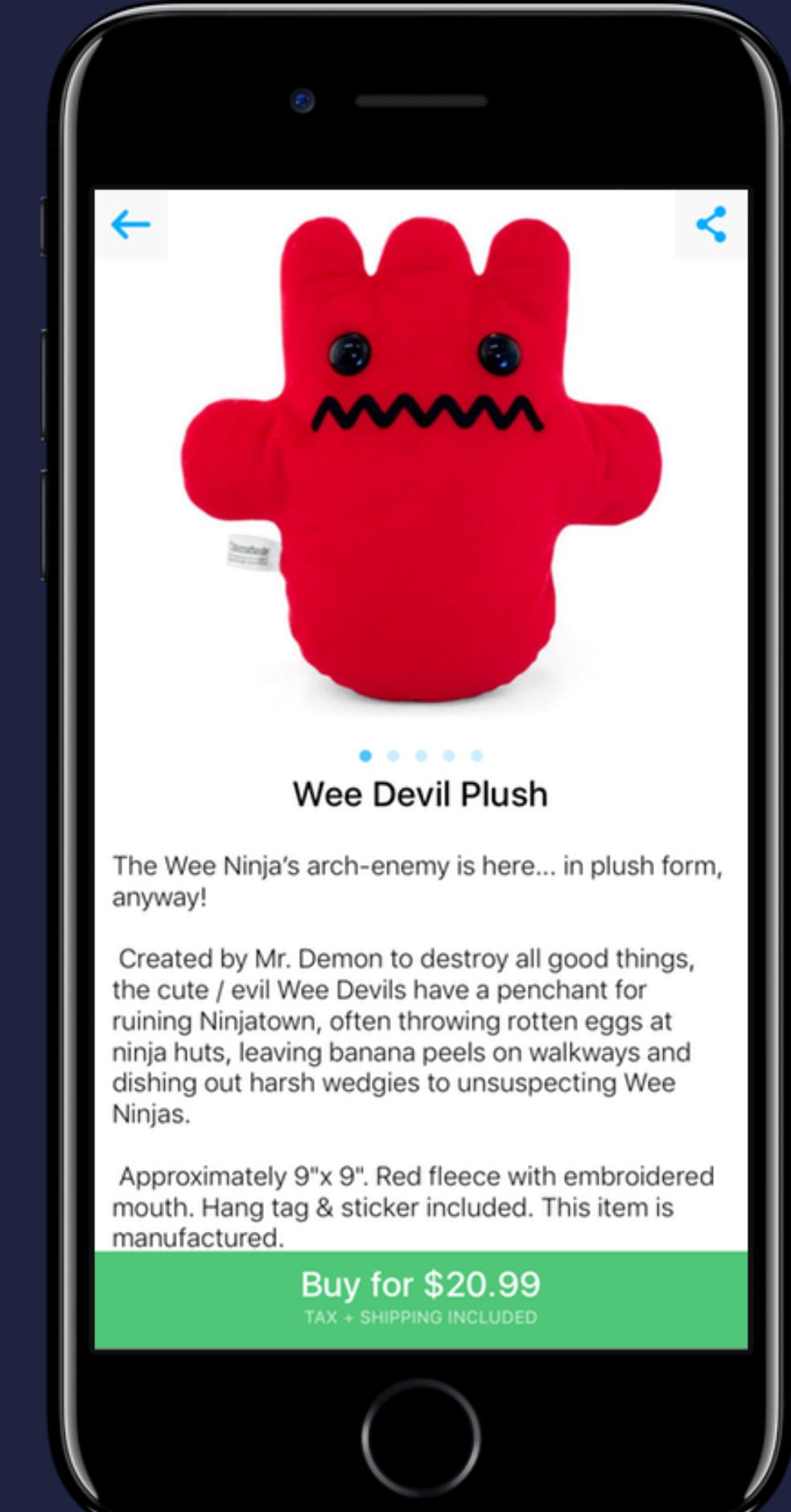
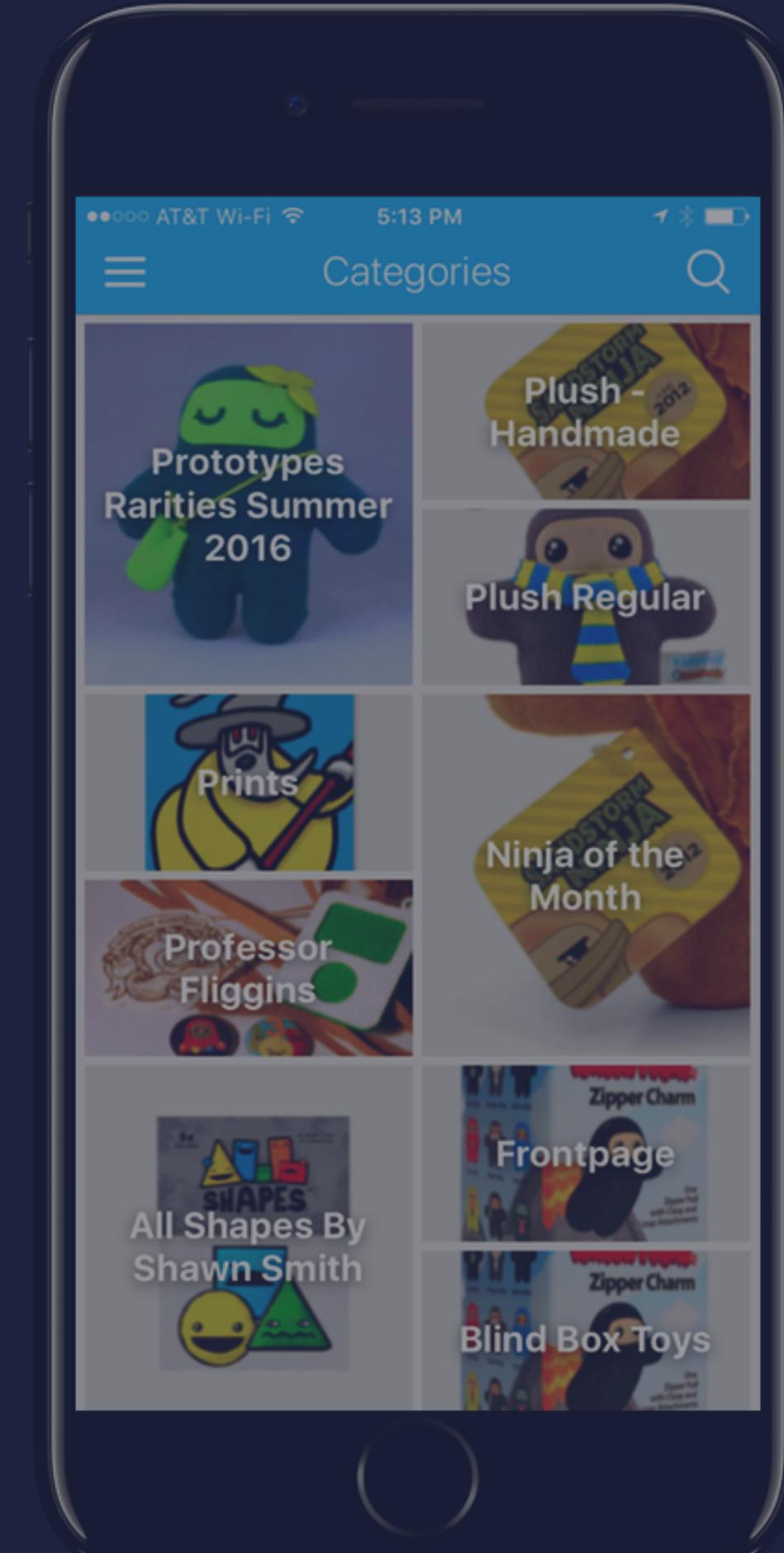
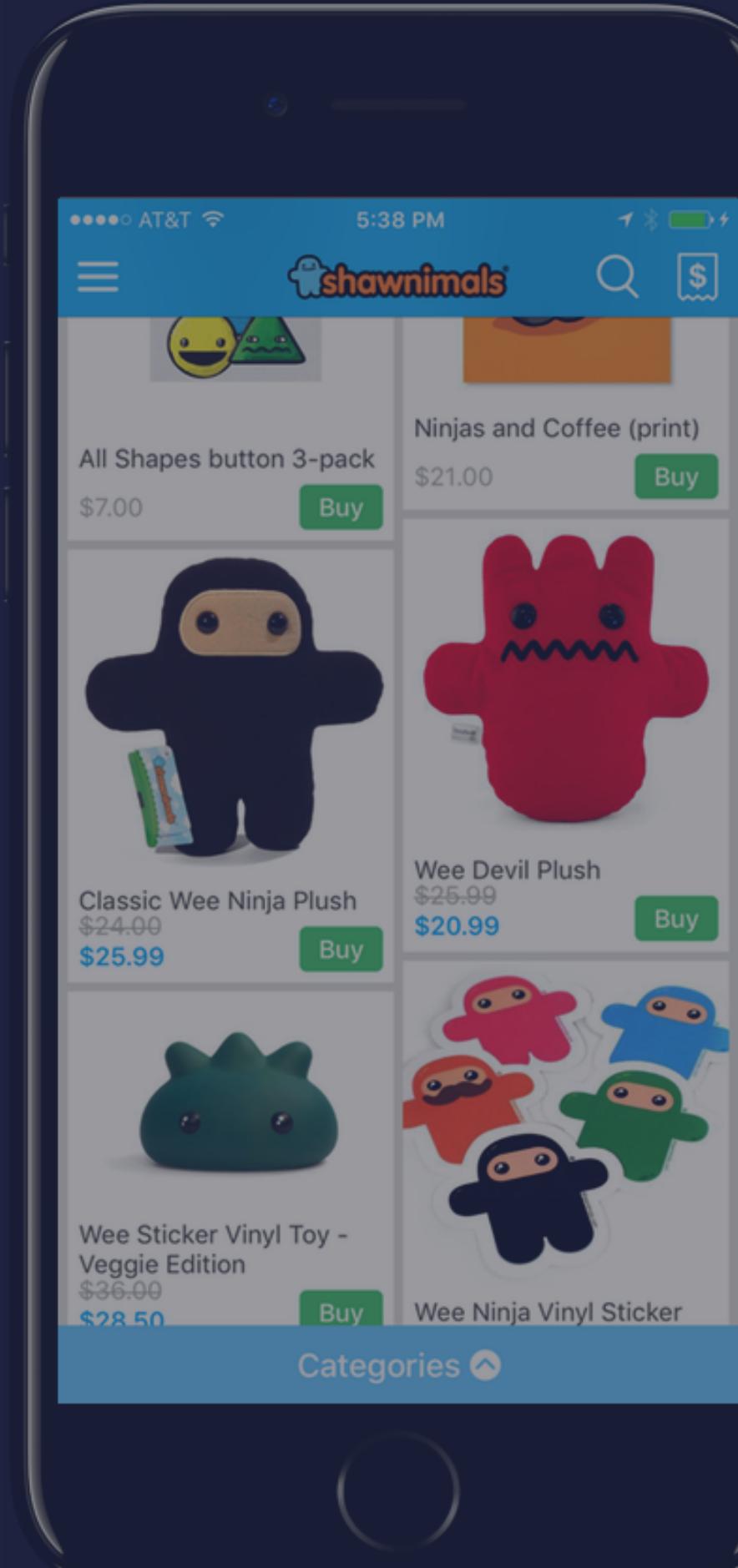


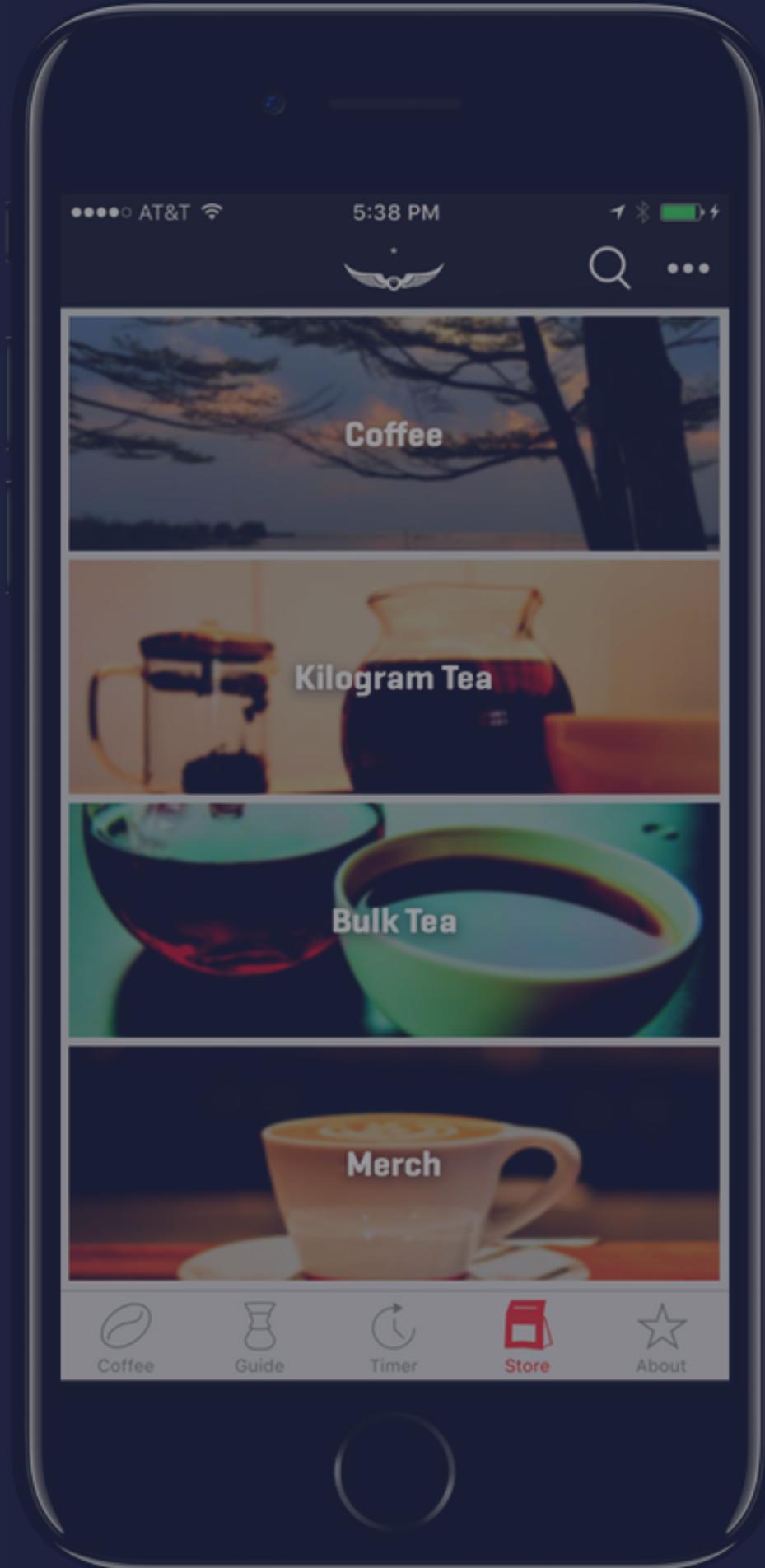
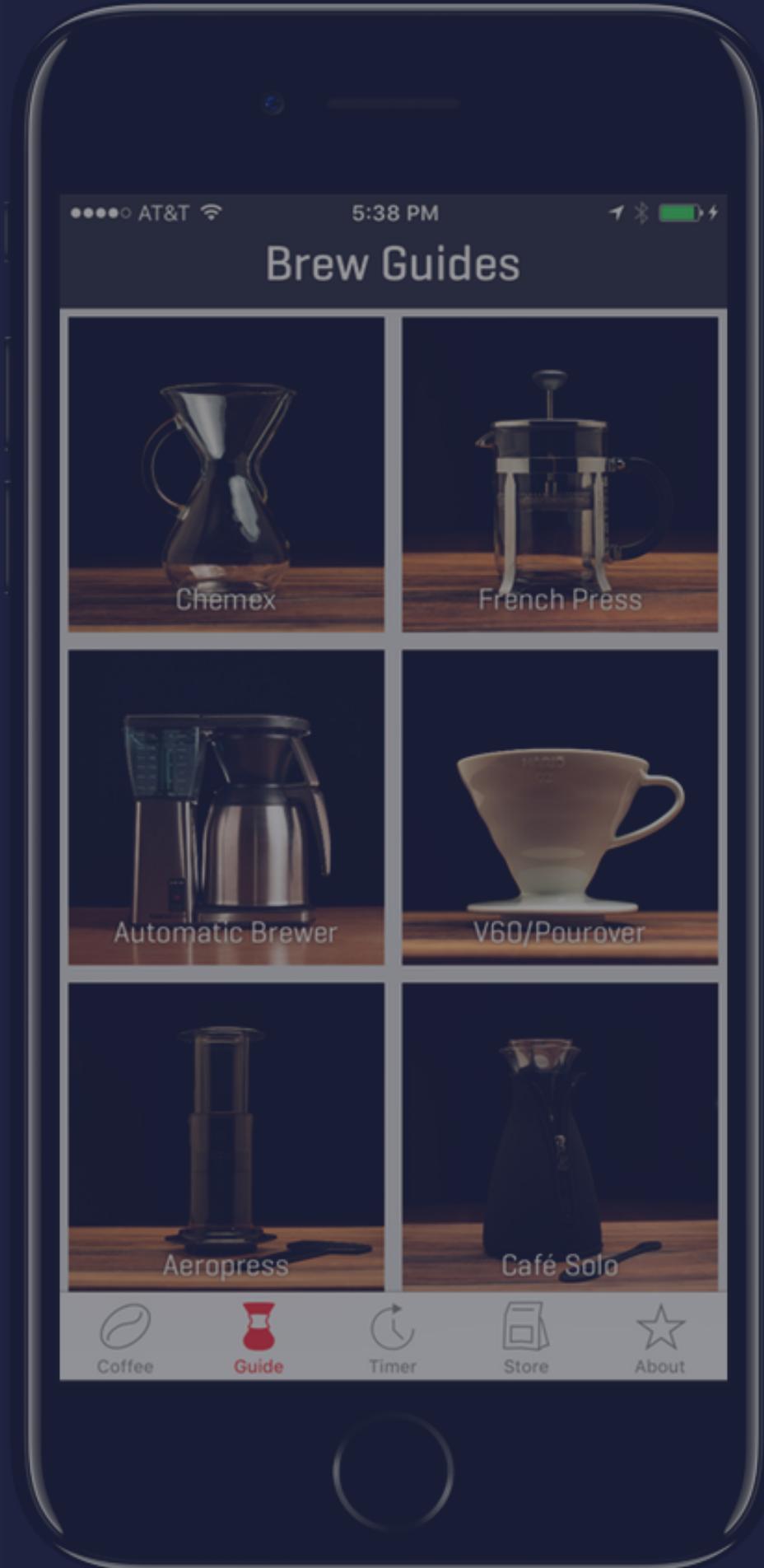
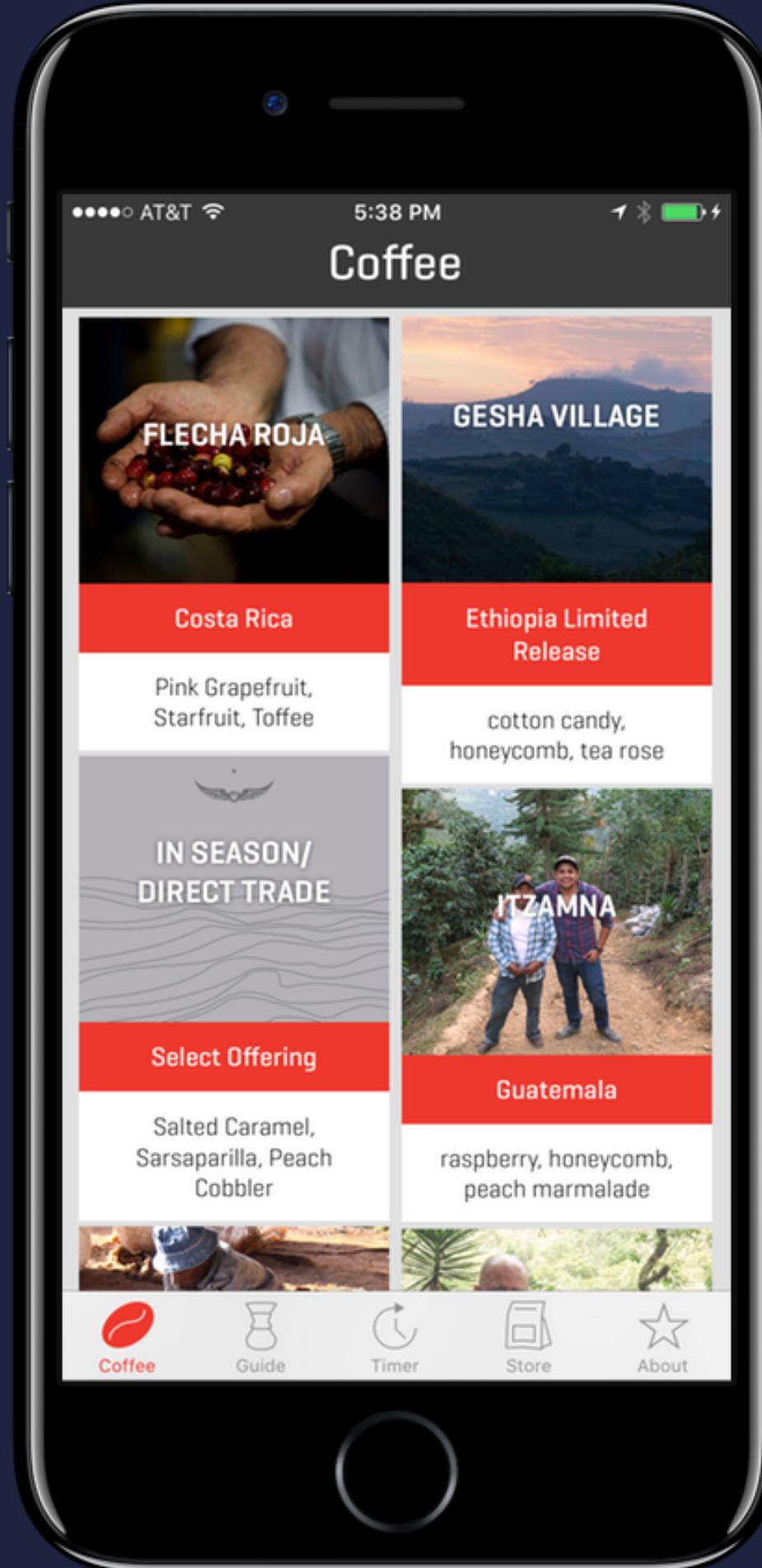
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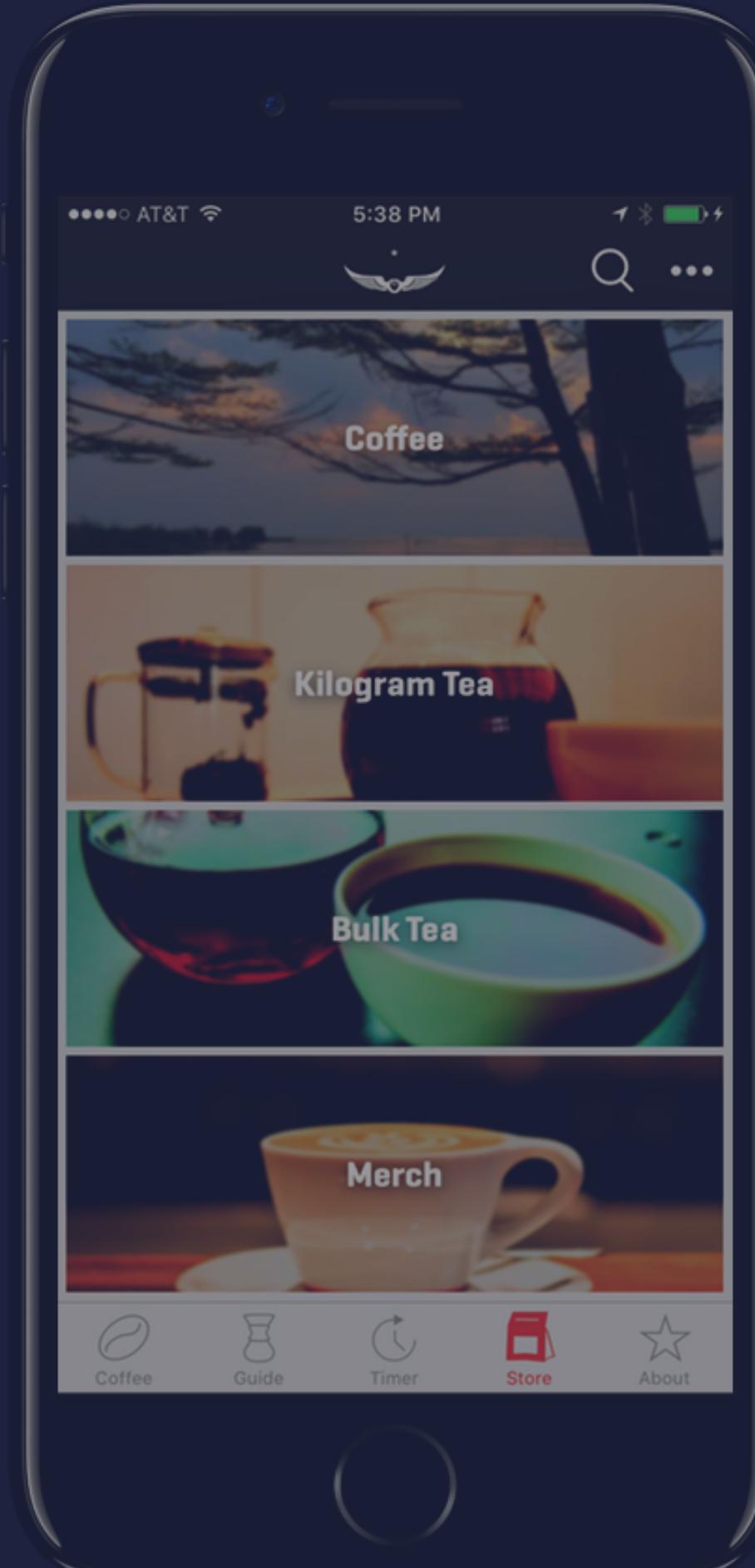
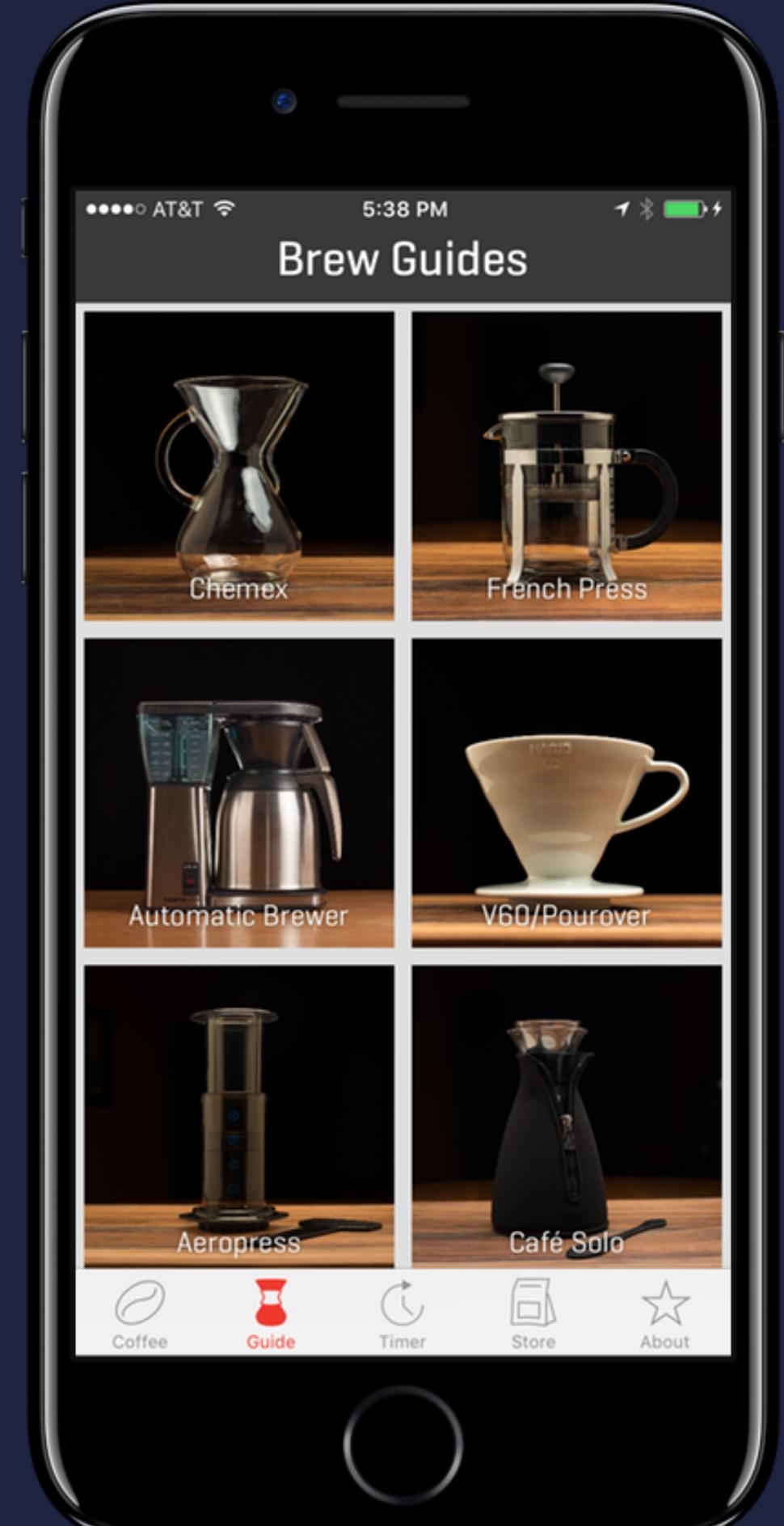
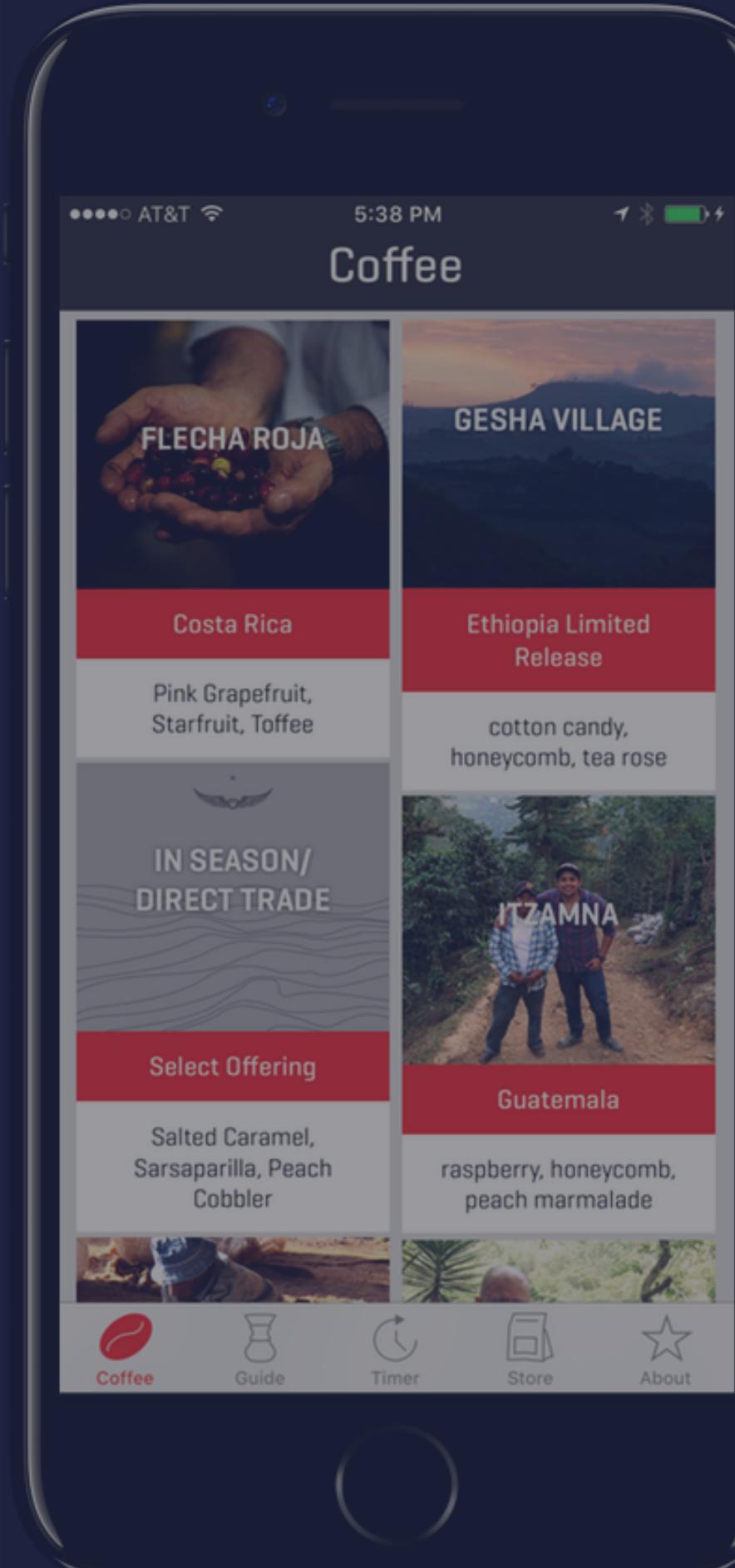


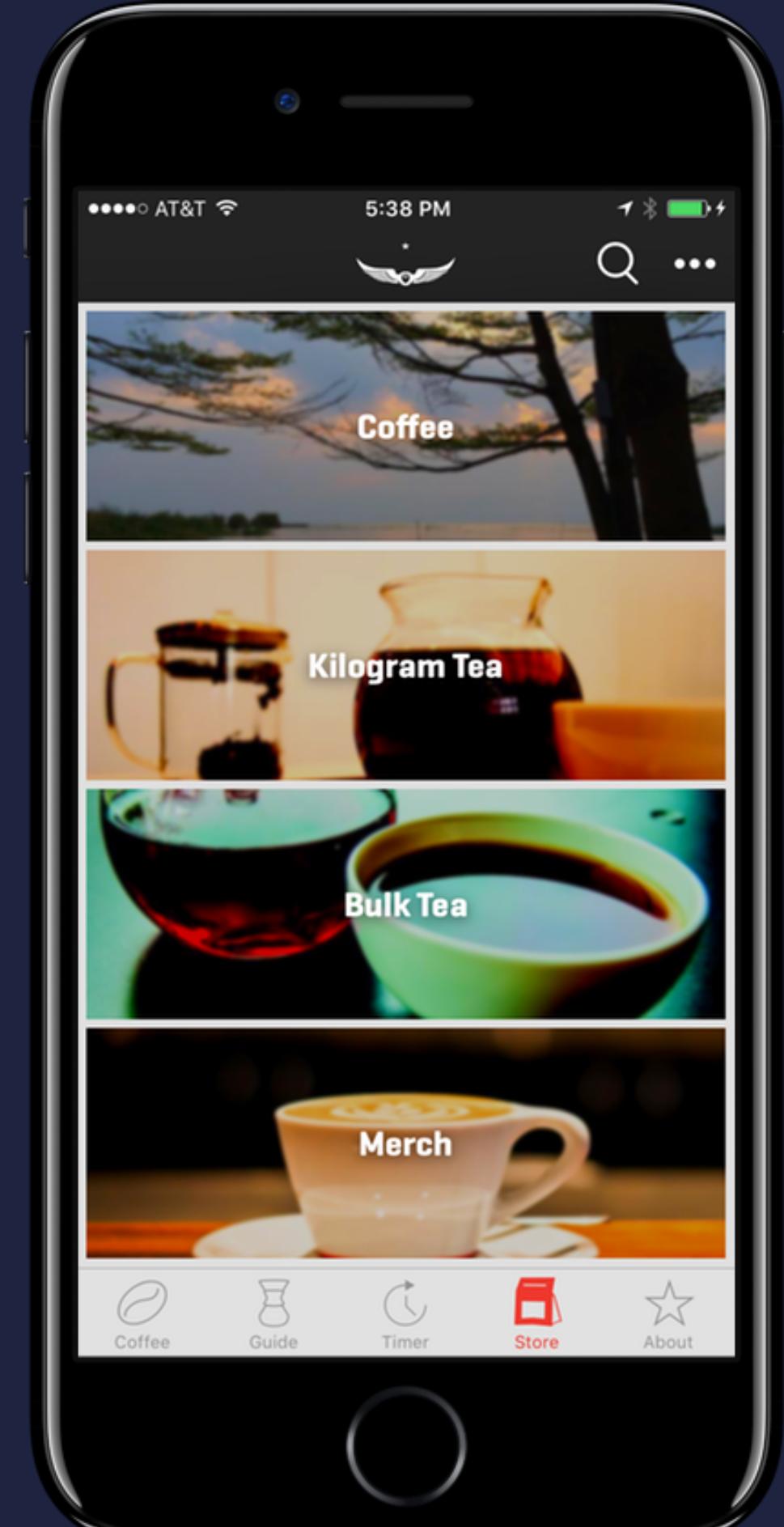
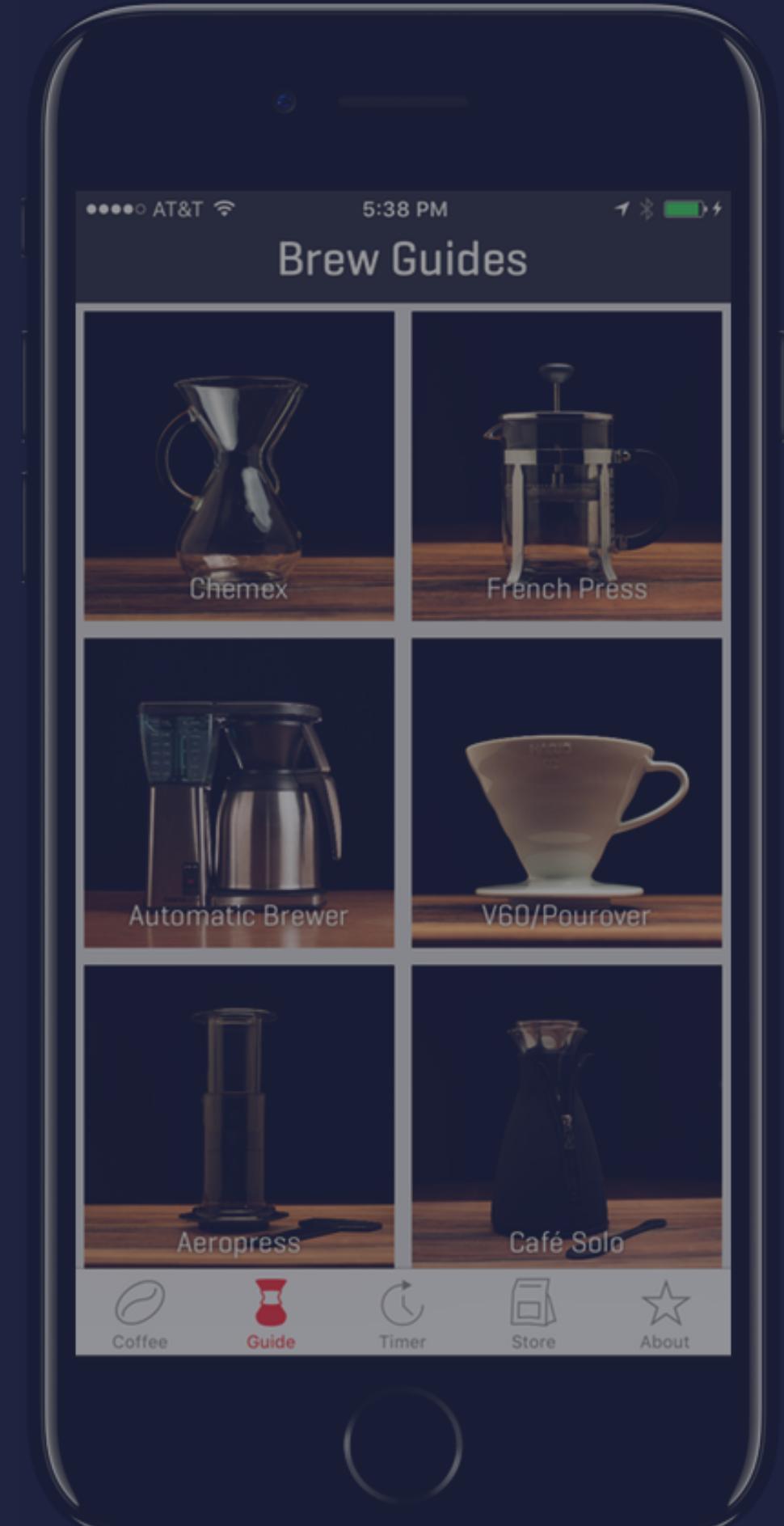
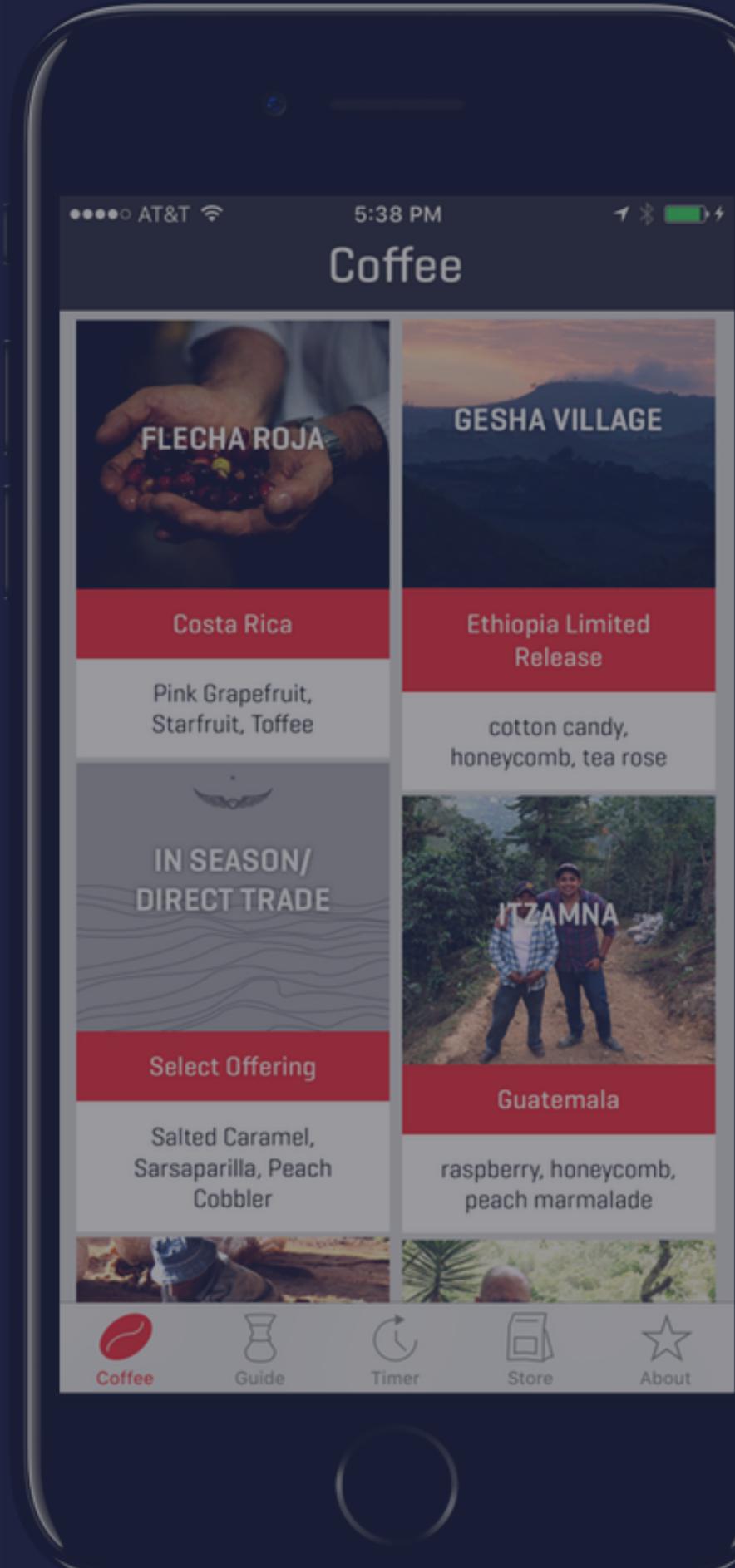








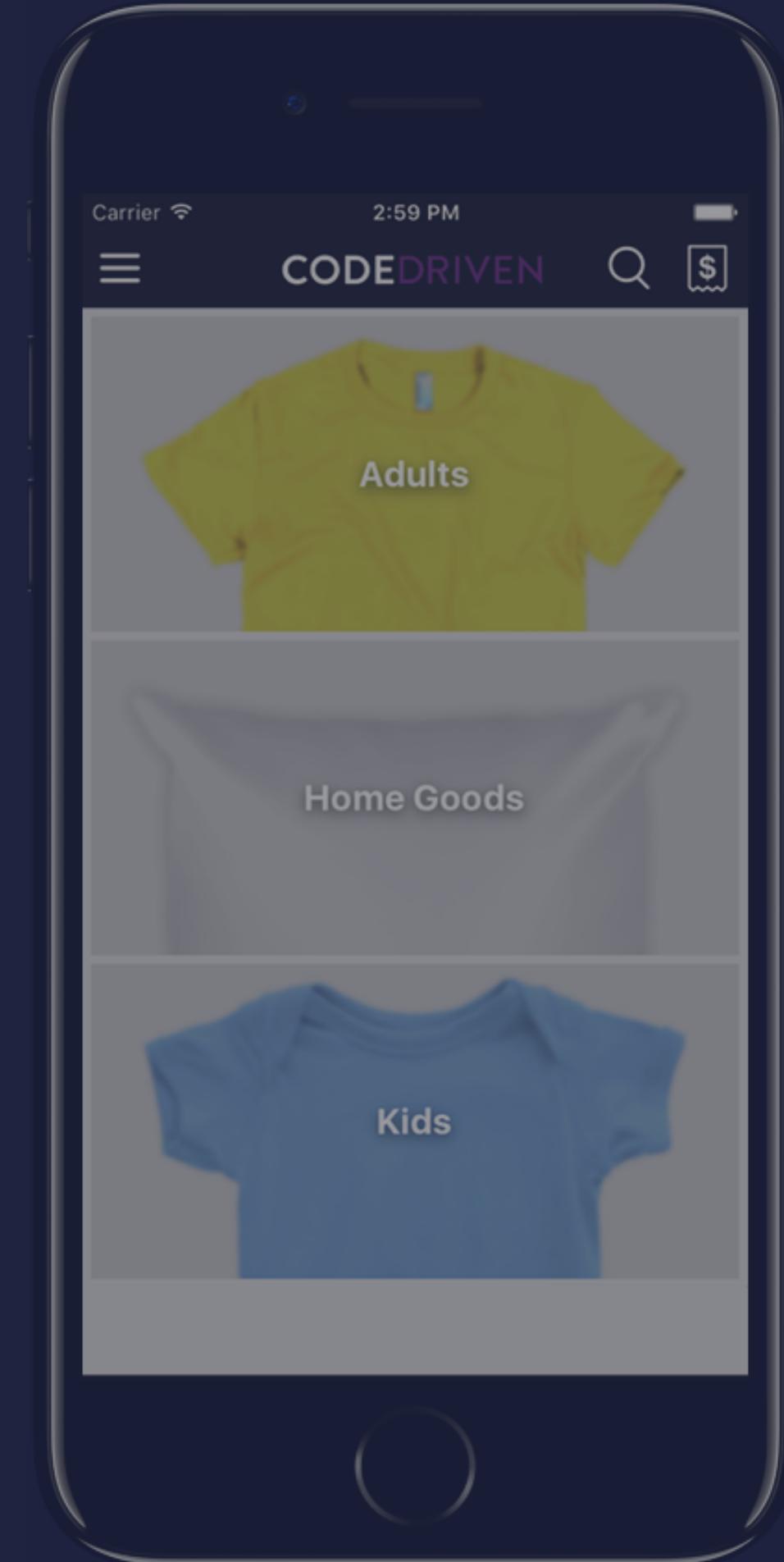
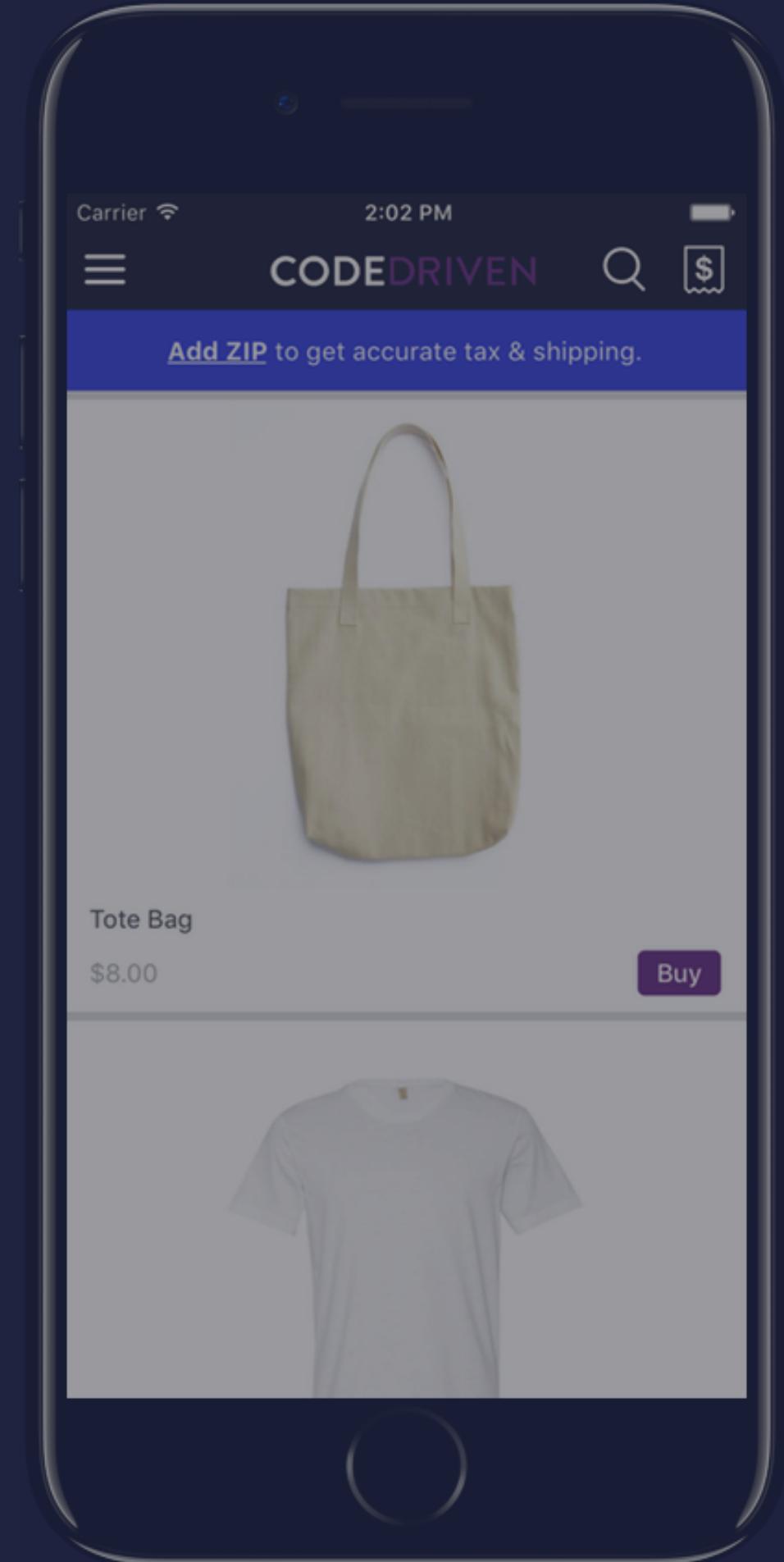
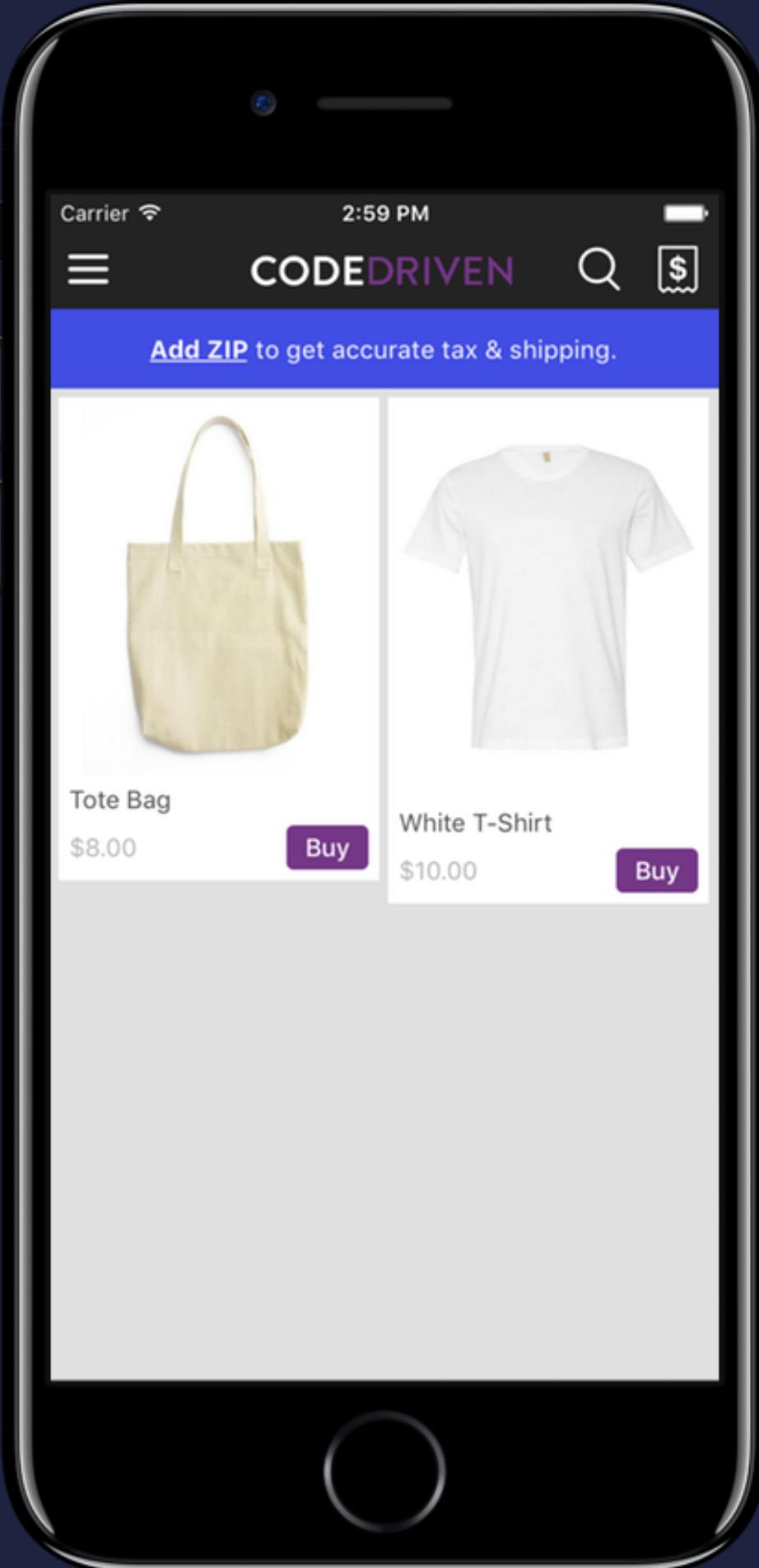


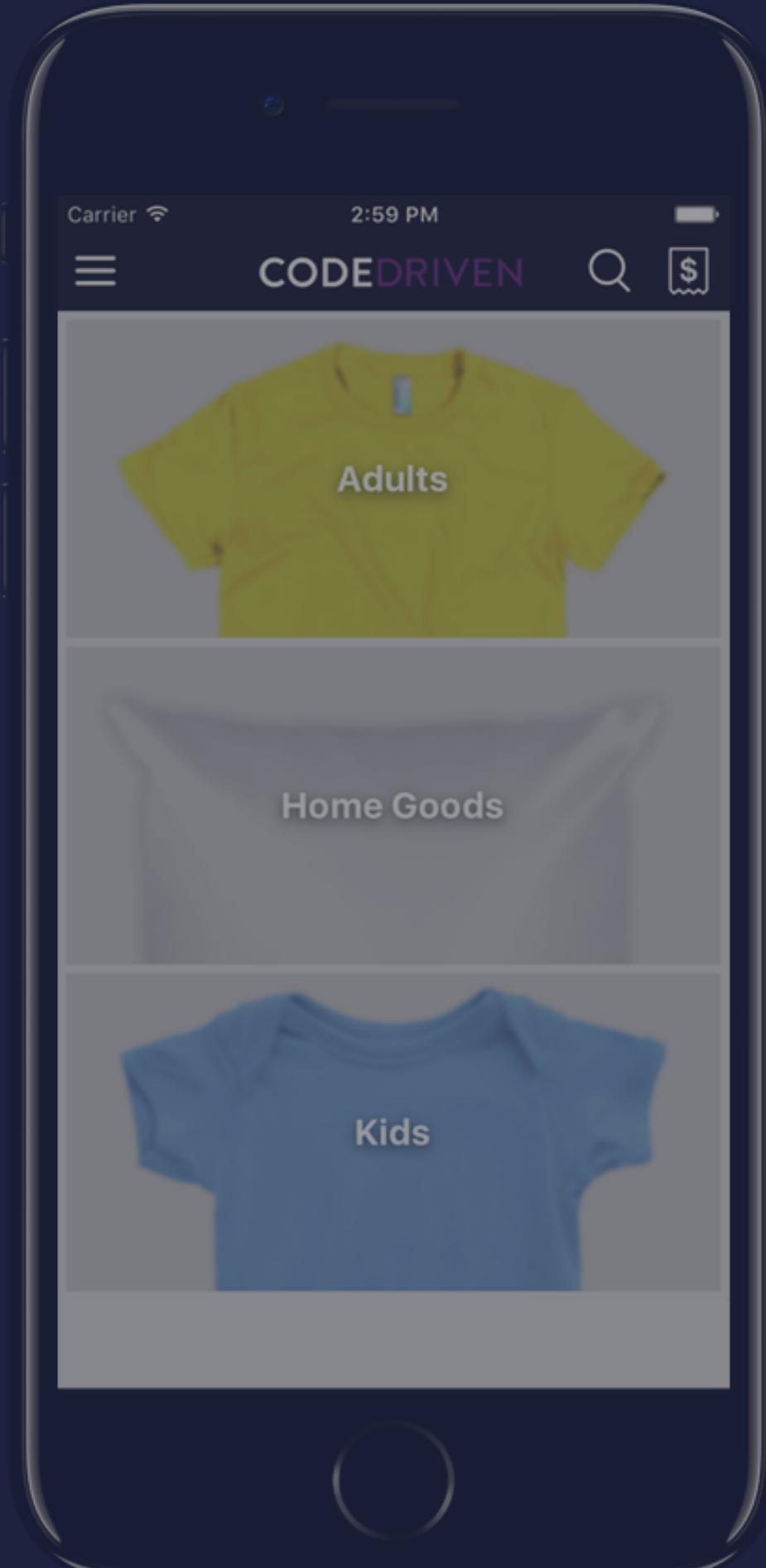
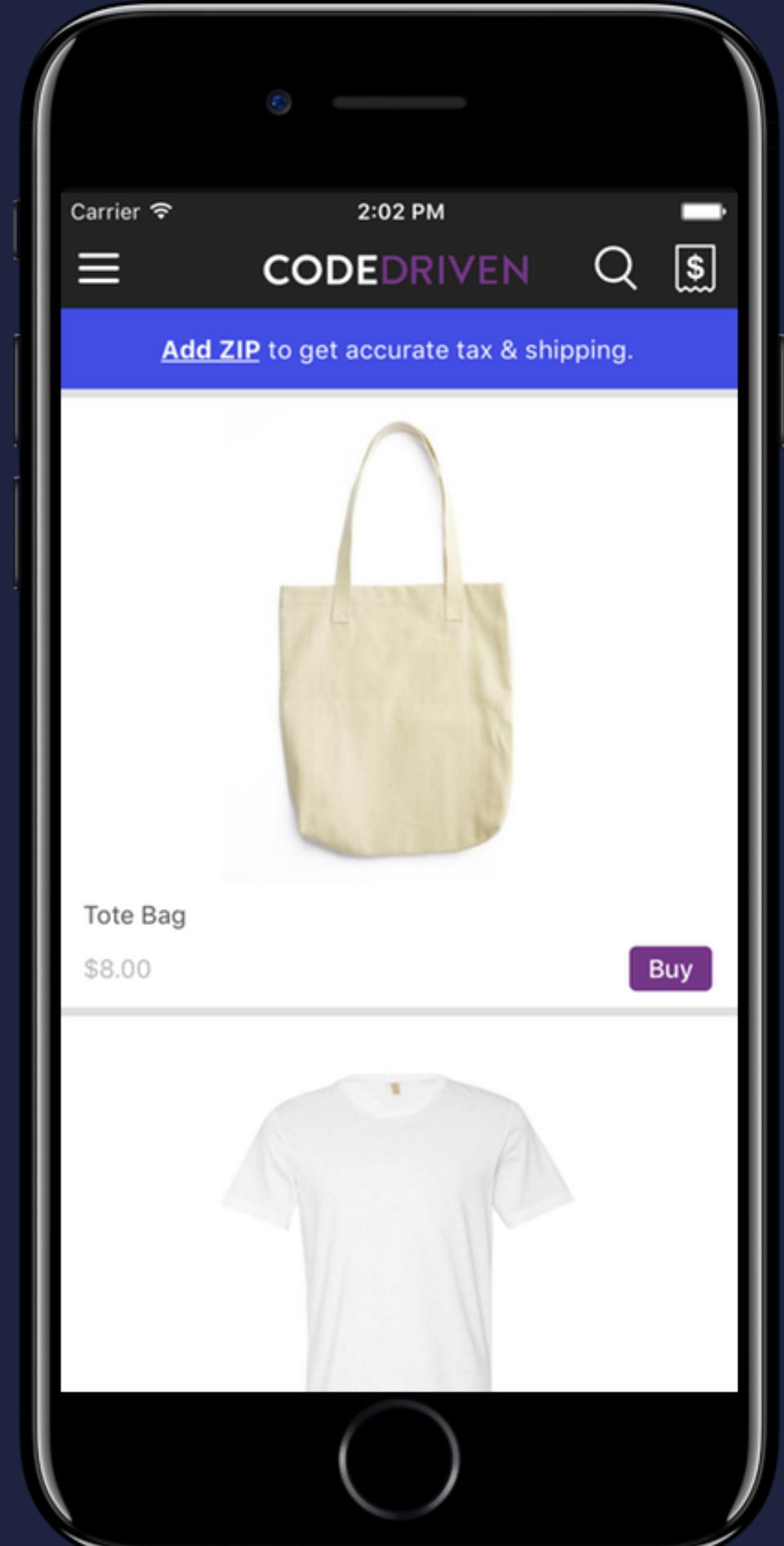
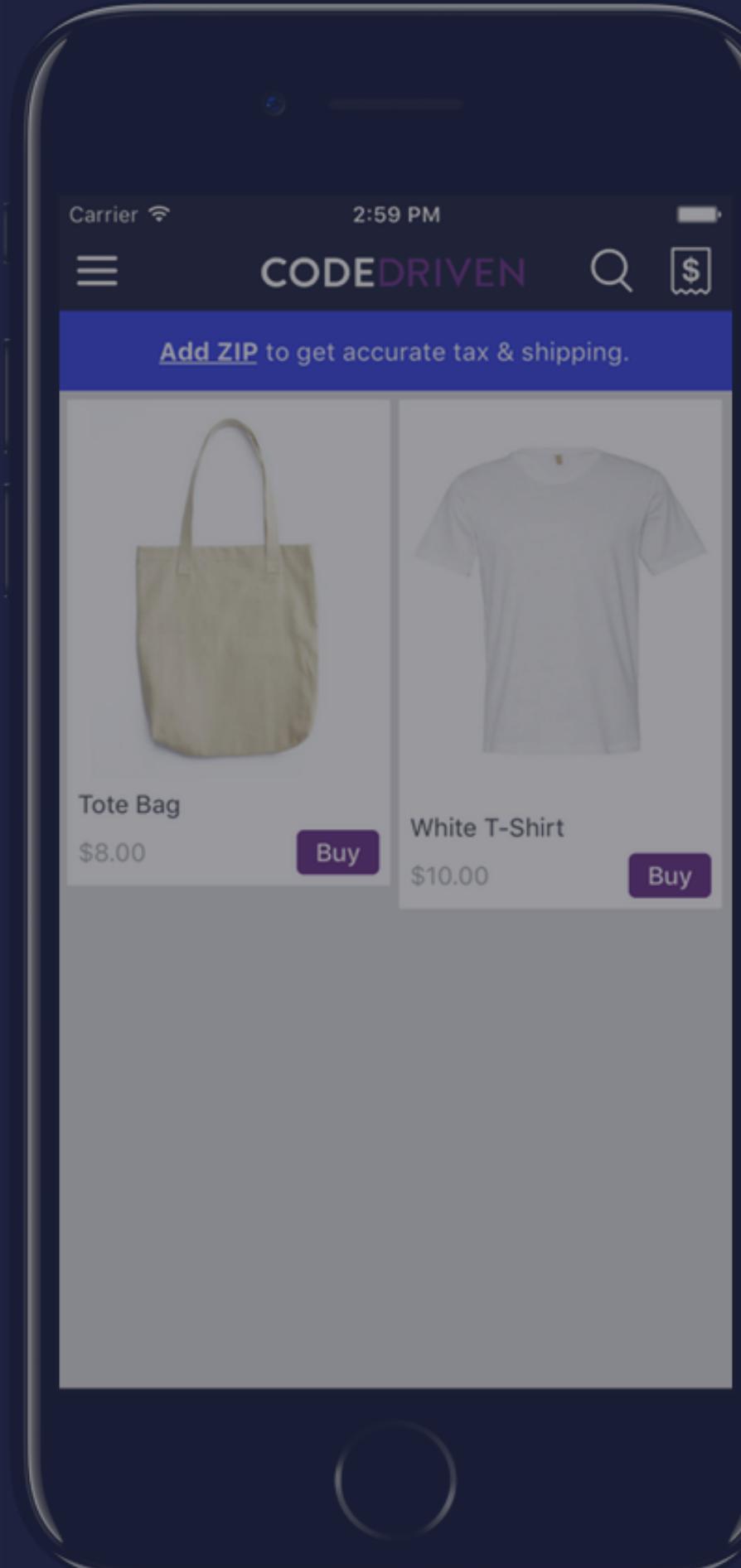


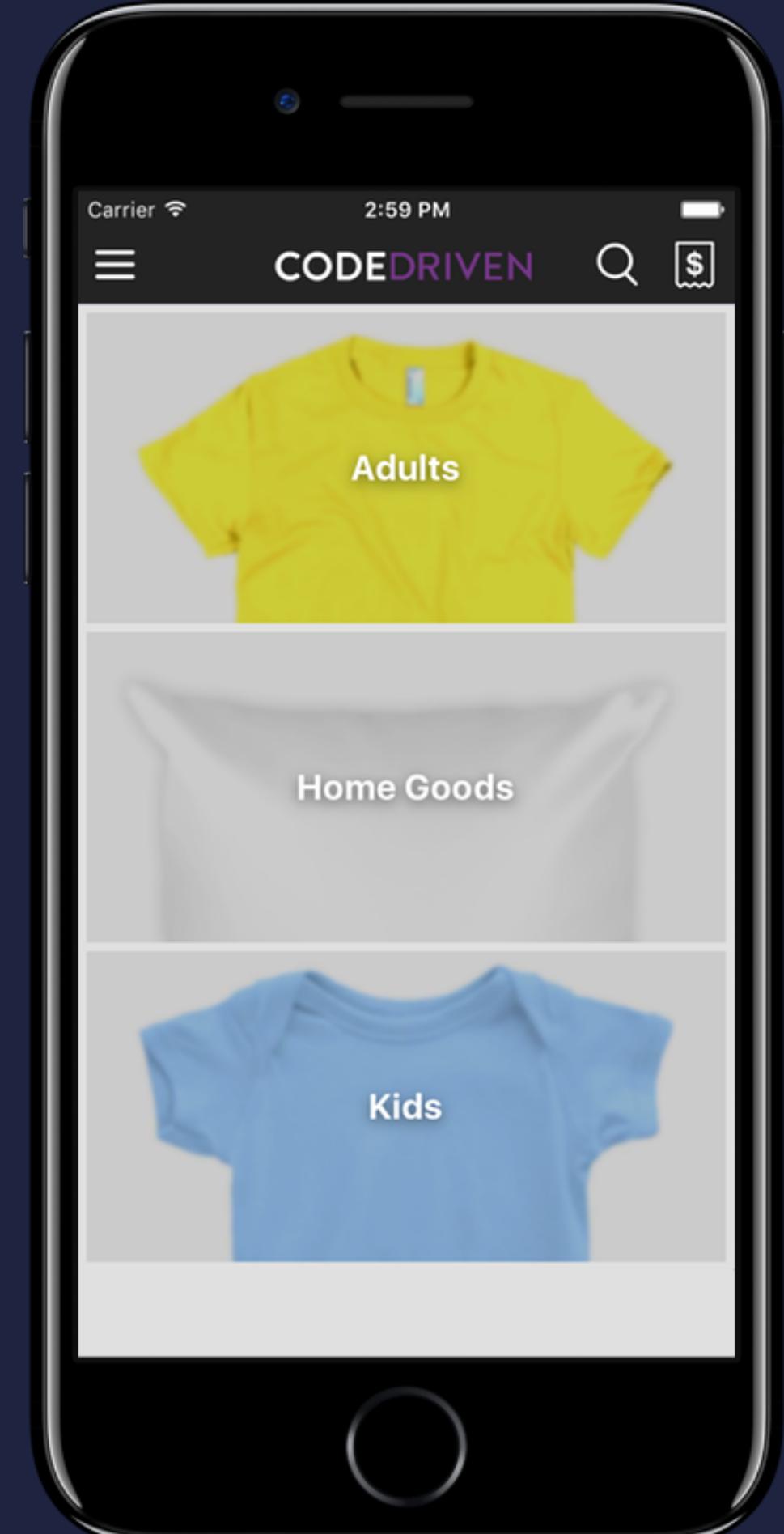
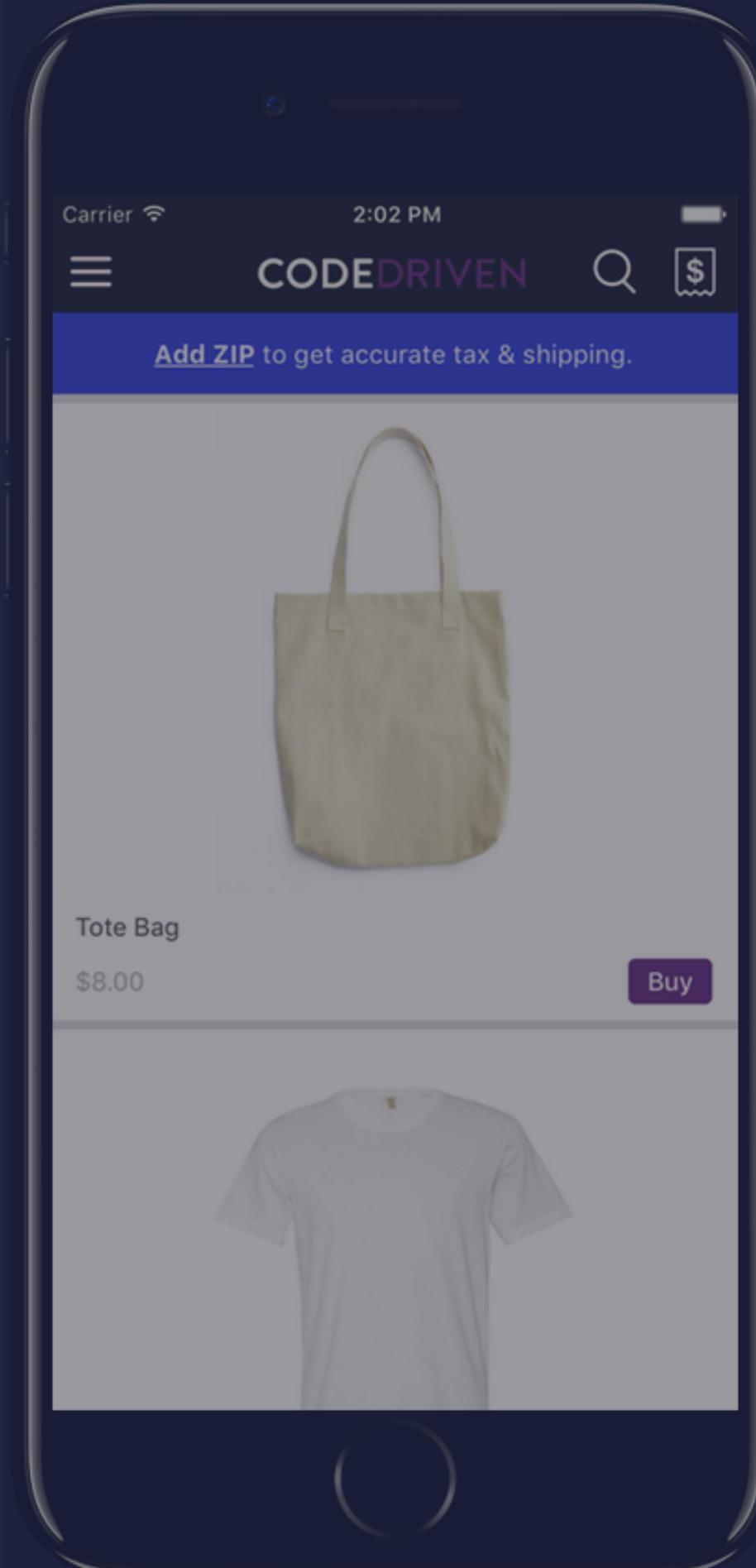
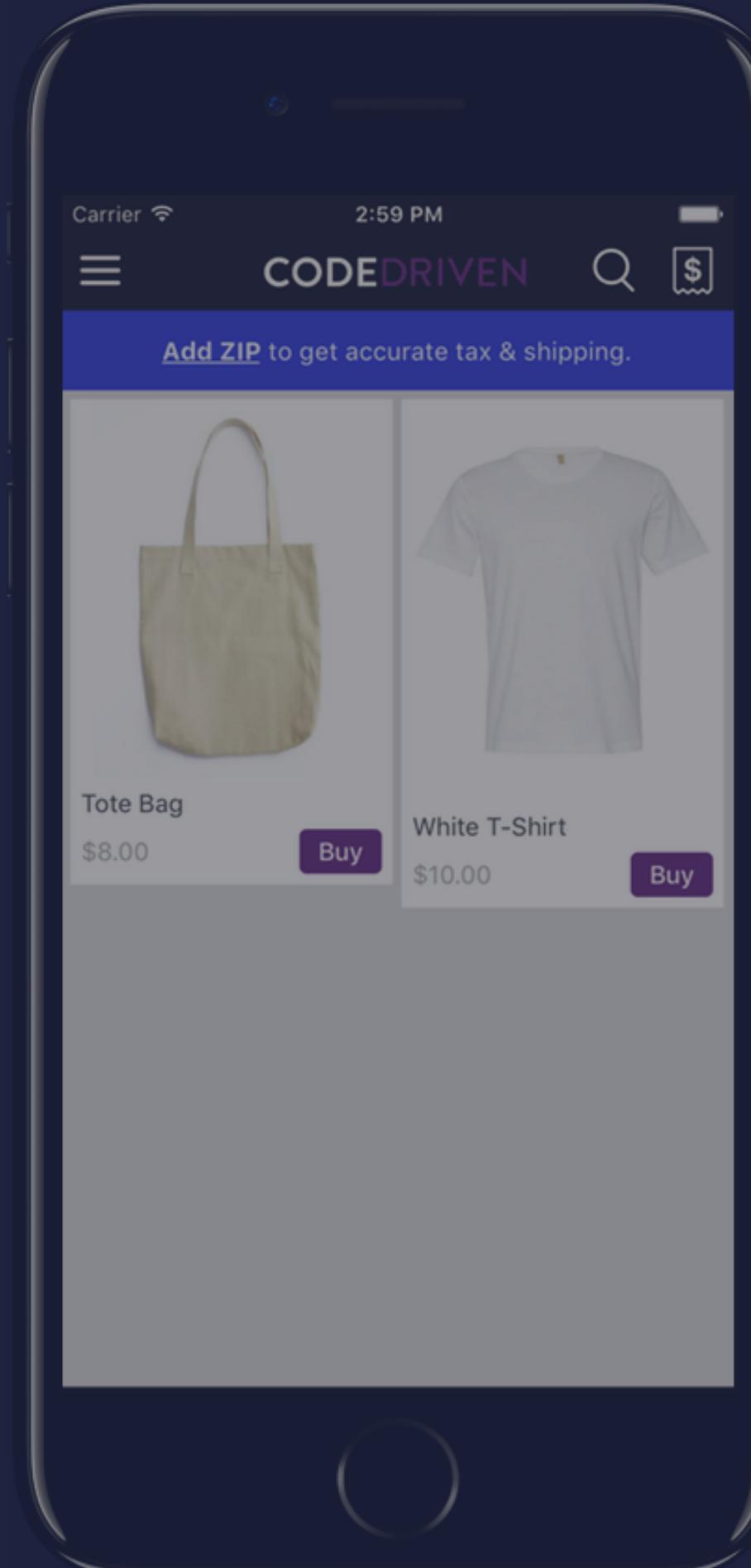
**RETAILERS CAN
CUSTOMIZE
THEIR SHOP**

THEMING OPTIONS

- ▶ Home screen style
- ▶ Colors
- ▶ Images
- ▶ Fonts







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2:48 PM



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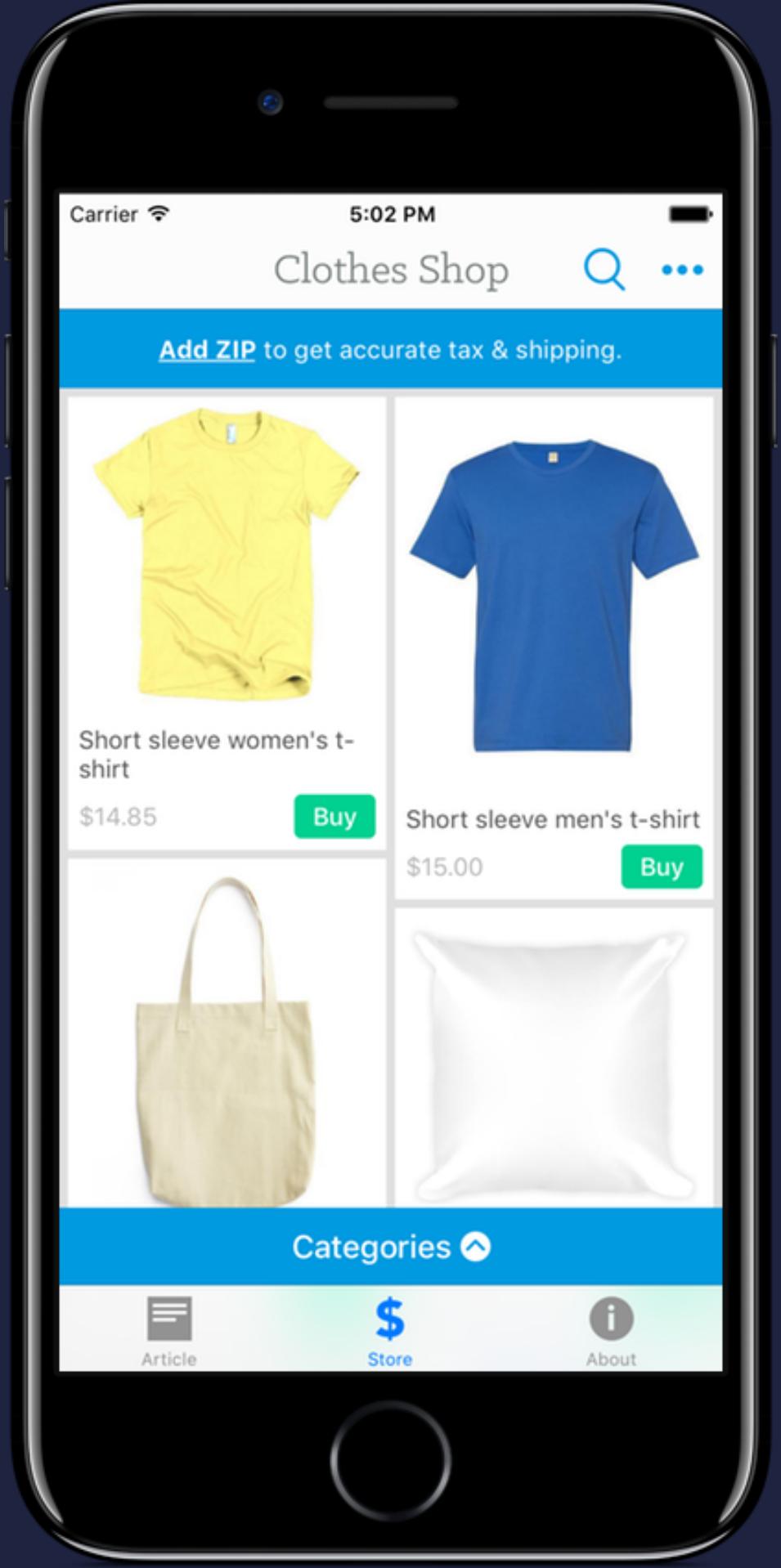
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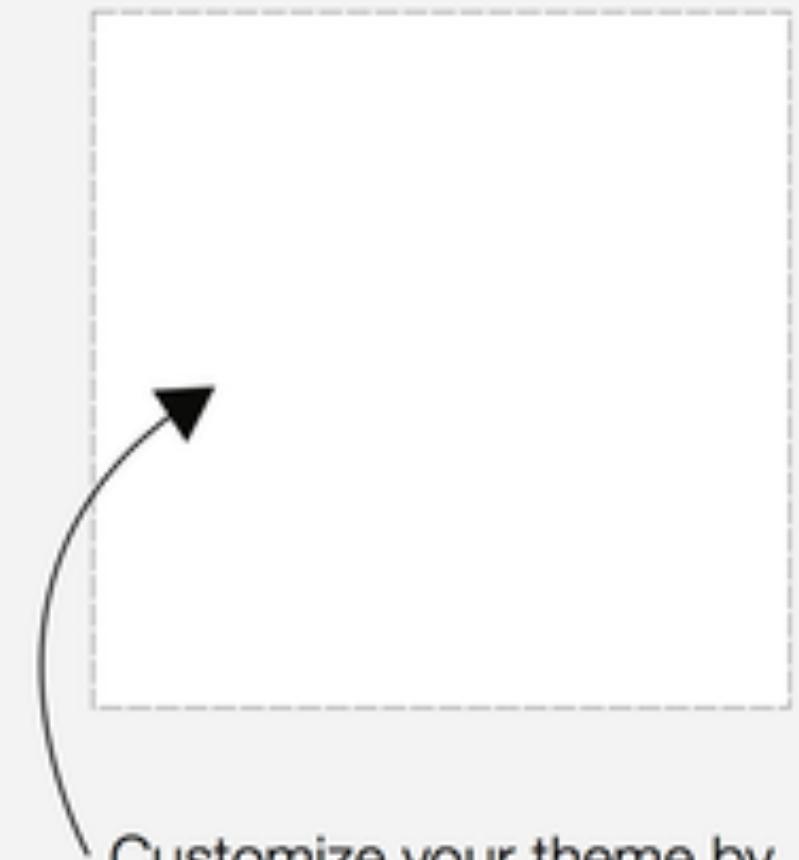


**STORED AS
KEY . VALUE**

**CONFIGURED VIA
PAYPAL COMMERCE
CONTROL PANEL**

**REASONABLE
DEFAULTS**





Customize your theme by
going to commerce.paypal.com

APP

**WEB CLIENT BACKEND
GENERATES
CSS**

WHEN YOU OPEN THE APP, WE FETCH...

- ▶ Access token
- ▶ Name, email
- ▶ Account flags
- ▶ Platform flags
- ▶ Products
- ▶ Payment methods

AND ALSO...

- ▶ Shipping addresses
- ▶ Shipping promotions
 - ▶ Store info
- ▶ Billable countries
- ▶ Shippable countries
- ▶ Account identifiers

AND THE THEME

THEME

- ▶ Colors
- ▶ Image URLs
- ▶ Home screen style

JSON: ACCENT COLOR

```
{  
  "store_resource_type_id": 1,  
  "resource_type": {  
    "id": 1,  
    "key": "accent_color",  
    "name": "Accent color",  
    "description": "The links in your app.",  
    "default_value": "#009CDE",  
    "is_image": false  
  },  
  "id": 505,  
  "value": "#00bfff"  
}
```

JSON: HEADER LOGO

```
{  
  "store_resource_type_id": 10,  
  "resource_type": {  
    "id": 10,  
    "key": "logo_header",  
    "name": "Header logo",  
    "description": "This logo will appear in the header.",  
    "default_value": "",  
    "is_image": true  
  },  
  "id": 123,  
  "value": "https://example.com/code_driven_logo.png"  
}
```

HOME SCREEN STYLE

```
{  
  "home_screen_parent_id": "home_goods",  
  "home_screen_type": "small_products"  
}
```

**HOW DOES THIS
GET CONSUMED?**

IOS SDK CLASSES

- ▶ Store Resource Model
- ▶ Theme Helper
- ▶ Themed ImageView

STORE RESOURCE MODEL

- ▶ Simple
- ▶ Translates JSON from the API to Objective-C

THEME HELPER CLASS

- ▶ Maintains the key-value pairs in memory
- ▶ Saves data locally with NSUserDefaults
- ▶ Converts colors from Hex to RGB to UIColor

THEMED IMAGE VIEW CLASS

- ▶ Subclass of `UIImageView`
- ▶ Initialized with an image key
 - ▶ Downloads image
 - ▶ Caches image
 - ▶ Displays image

**WHAT HAPPENS
WHEN THE THEME
REFRESHES?**

USER INTERFACE
DYNAMICALLY
UPDATES

NSNotificationCenter

THEME HELPER CLASS

```
+ (void)saveStoreResources:(NSArray *)resources{
    // ...
    [[NSNotificationCenter defaultCenter]
        postNotificationName:ThemeDidUpdateNotification
        object:nil];
}
```

BUY BUTTON CLASS

```
+ (instancetype)newInstance  
{  
    // ...  
    [[NSNotificationCenter defaultCenter] addObserver:button  
        selector:@selector(didUpdateTheme:)  
        name:ThemeDidUpdateNotification  
        object:nil];  
    // ...  
}
```

BUY BUTTON CLASS

```
- (void)didUpdateTheme:(NSNotification *)notification{  
    [self updateBuyButtonColor];  
}
```

The logo consists of the word "OFFLINE" in a bold, white, sans-serif font. The letter "O" is replaced by a circular icon containing a smaller circle, creating a stylized "O". The letters are outlined in a thin cyan color. The background is a dark blue gradient with a subtle grid pattern.

OFFLINE

CONNECTION INTERRUPTED

OFFLINE

- ▶ Embedded configuration file: plist
- ▶ Local cache: NSUserDefaults

API
SOURCE OF TRUTH

**HOW DO
RETAILERS
CONFIGURE IT ALL?**

CONTROL PANEL

Store settings

Shipping rates

Tax rules

Payment gateways

Branding

Web checkout

Order exports

Customer communication

Administrators

Admin activity

Social accounts

Webhooks

Branding

Personalize your store – however you choose to sell with PayPal Commerce, your customers will have a seamless experience that keeps your brand front and center.

Your Brand

iOS

Save theme

Buy button



#743787

Accent color



#ffffff

Background

The color behind the checkout form, receipt, and edit views.



#ECECEC

Logo

We recommend using a logo with your store's name that is at least 68px tall.



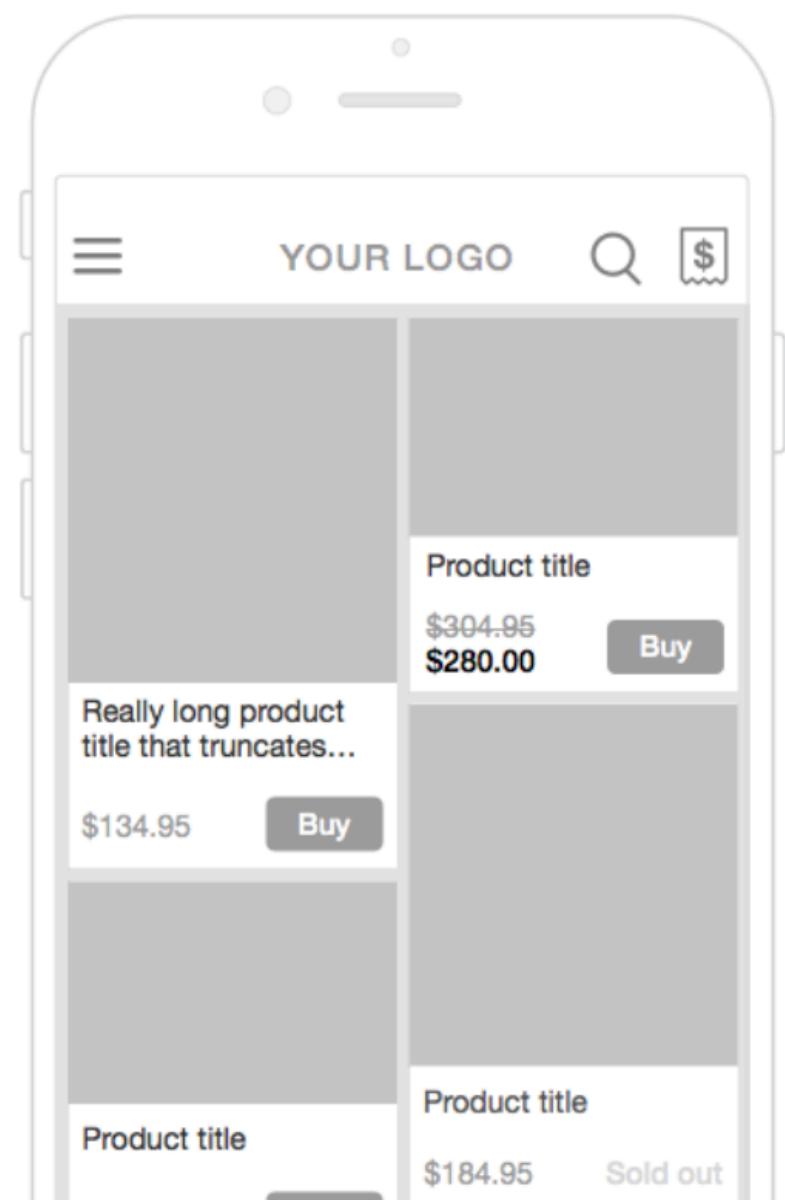
Change image

Home screen

Customize the first screen your customers will see.

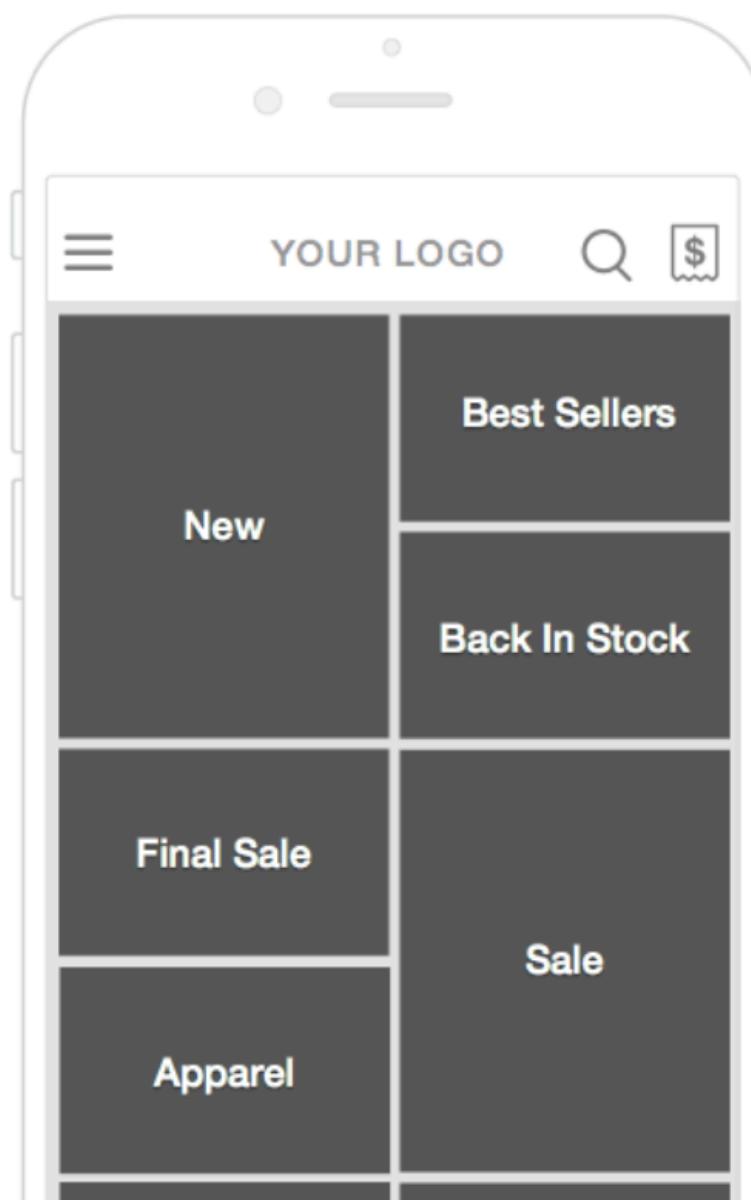
Featured Products

If your store has categories, you can choose one to feature. Otherwise, the home screen will list all products.



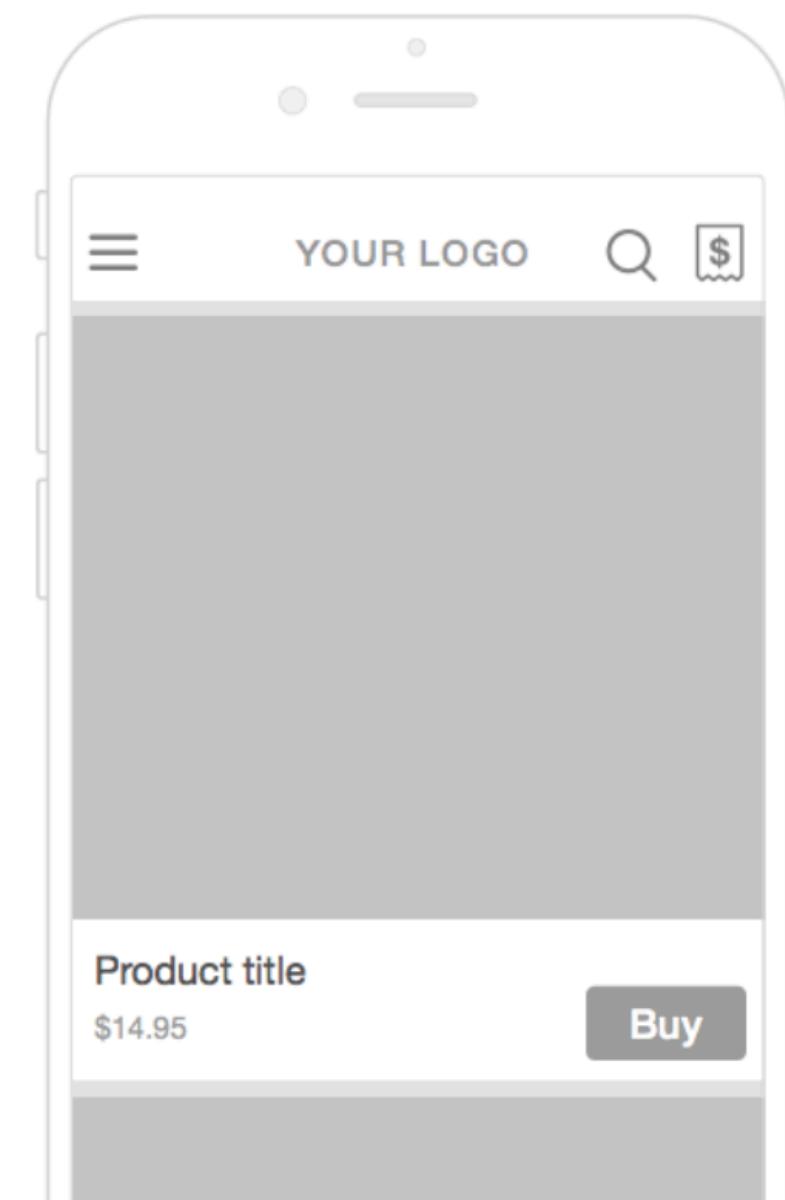
Category Grid

Display your top-level categories on your home screen.



Simple Feed

Only recommended for stores with fewer than 20 products and no categories.



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REVIEW

1. Retailers modifies theme in Control Panel
2. API stores theme in database
3. Customer opens app
4. iOS SDK fetches theme from API
5. The SDK refreshes its User Interface

Demo



FOONIT

REASONABLE DEFAULTS

iOS "SYSTEM FONT"

- ▶ iOS 8: Helvetica Neue
- ▶ iOS 9+: San Francisco

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▼ font		Dictionary	(5 items)
regular_font	 	String	AppleSDGothicNeo-Regular
thin_font		String	AppleSDGothicNeo-Thin
light_font		String	AppleSDGothicNeo-Light
medium_font		String	AppleSDGothicNeo-Medium
bold_font		String	AppleSDGothicNeo-Bold

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▼ font	Dictionary String	(5 items)
regular_font	String	Didot
thin_font	String	Didot
light_font	String	Didot
medium_font	String	Didot-Bold
bold_font	String	Didot-Bold

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CUSTOM FONTS

NOVA MONO

- ▶ From Google Fonts
- ▶ SIL Open Font License
- ▶ <https://fonts.google.com/specimen/Nova+Mono>

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FONT HELPER CLASS

```
+ (UIFont *)fontOfSize:(CGFloat)fontSize;  
  
+ (UIFont *)thinFontOfSize:(CGFloat)fontSize;  
+ (UIFont *)lightFontOfSize:(CGFloat)fontSize;  
  
+ (UIFont *)mediumFontOfSize:(CGFloat)fontSize;  
+ (UIFont *)boldFontOfSize:(CGFloat)fontSize;
```

TYPOS OR MISSING FILES

- ▶ Simply fall back to the default system font.

demo



**WHY SHOULD
YOU CARE?**

THANKS!

ROBERT TOLAR HAINING
TOLAR@BRAINTREEPAYMENTS.COM



@TOLAR

PAYPAL.COM/COMMERCE