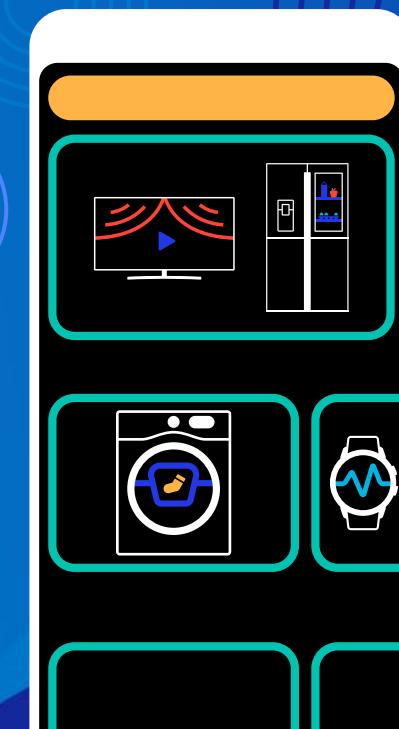


# Bixby Studio

## Result View Tutorial

Jonathan Pan  
Technical Evangelist  
Viv Labs / Samsung  
Twitter: @JohnWithoutTheH



# Download the Code

The code from where this tutorial starts from is on the master branch here:

<https://github.com/bixbydevelopers/result-view-tutorial>

The screenshot shows the GitHub repository page for 'result-view-tutorial'. At the top, there's a header with the repository name 'bixbydevelopers / result-view-tutorial', a 'Watch' button (1 watch), an 'Unstar' button (1 star), and a 'Fork' button (0 forks). Below the header, there are navigation links for 'Code', 'Issues 0', 'Pull requests 0', 'Projects 0', 'Wiki', 'Security', 'Insights', and 'Settings'. A note states: 'This capsule has a tutorial video associated with it. This is a code along capsule which demonstrates result views in Bixby Studio.' Below this, there are tabs for 'bixby', 'bixby-developer-studio', 'result-view', and 'Manage topics'. The repository summary shows '4 commits', '2 branches', '0 releases', and '1 contributor'. A yellow bar highlights the commit count. Below the summary, there are buttons for 'Branch: master ▾', 'New pull request', 'Create new file', 'Upload files', 'Find File', and a prominent green 'Clone or download ▾' button. On the left, a list of commits shows the first commit by 'jonmpm' updating 'readme.md'. On the right, there's a 'Clone with HTTPS' section with a copy link: <https://github.com/bixbydevelopers/re>, and buttons for 'Open in Desktop' and 'Download ZIP'.

# The Data Structure

JSON

/code/utils/pets.js

```
1 // array of pet objects. Hardcoded data to display in the capsule.  
2 const pets = [  
3   {  
4     name: "Moxie",  
5     species: "cat",  
6     image: "/images/moxie.jpg",  
7     images: [{url:"/images/moxie.jpg"}, {url:"/images/moxie-1.png"}, {url:"/images/moxie-2.png"},  
     {url:"/images/moxie-3.png"}],  
8     height: 9.6,  
9     weight: 9.4,  
0     age: '3 yrs',  
1     gender: "Female ♀",  
2     bio:  
3       "Moxie works very hard every day to become Instagram famous, shameless plug:  
        @moxie.the.calico\n\nAfter a tough life on the streets, she currently resides with her owner where she  
        loves being irresistably cute, seeing how long she can stretch a single meow, and playing fetch with her  
        human. Moxie loves cuddles, watching birds, and punching her evil doppelganger in the mirror.",  
4     interests: [  
5       "Sitting on keyboards",  
6       "Maining Pikachu in SSBU",  
7       "Reading books 📖",  
8       "Sleeping on her owner's face 😴",  
9       "Asking for food at 4am",  
0     ],  
1     link: "https://www.instagram.com/moxie.the.calico/",  
2     linkDescription: "Moxie's Instagram"  
3   }]
```

Model

/models/Concepts/Pet.model.bxb

```
1 structure (Pet) {  
2   description (A pet)  
3   property (name) {  
4     type (Name)  
5     min (Required) max (One)  
6   }  
7   property (image) {  
8     type (viv.core.Text)  
9     min (Required) max (One)  
10    visibility (Private)  
11  }  
12  property (images) {  
13    type (AdditionalImages)  
14    min (Optional) max (Many)  
15  }  
16  property (bio) {  
17    type (viv.core.Text)  
18    min (Required) max (One)  
19    visibility (Private)  
20  }  
21  property (species) {  
22    type (Species)  
23    min (Required) max (One)  
24    visibility (Private)  
25  }  
26  property (height) {
```

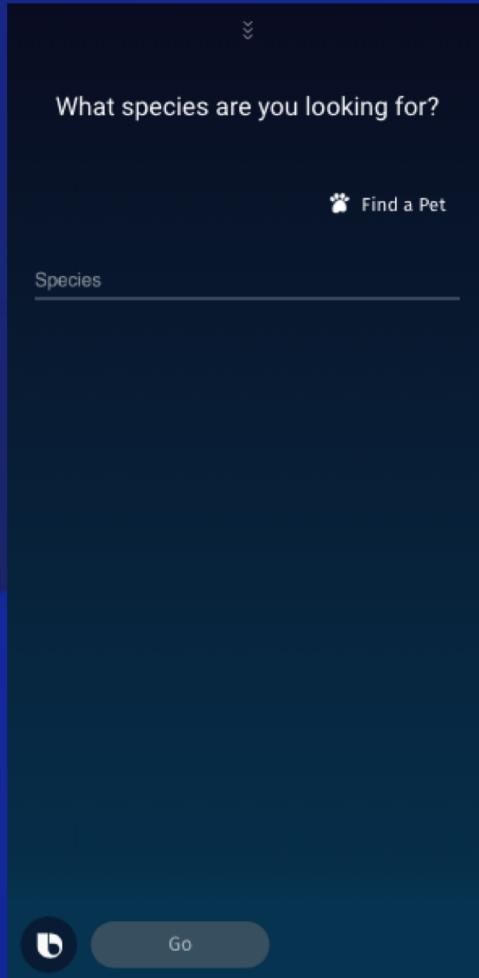


# Views in Bixby

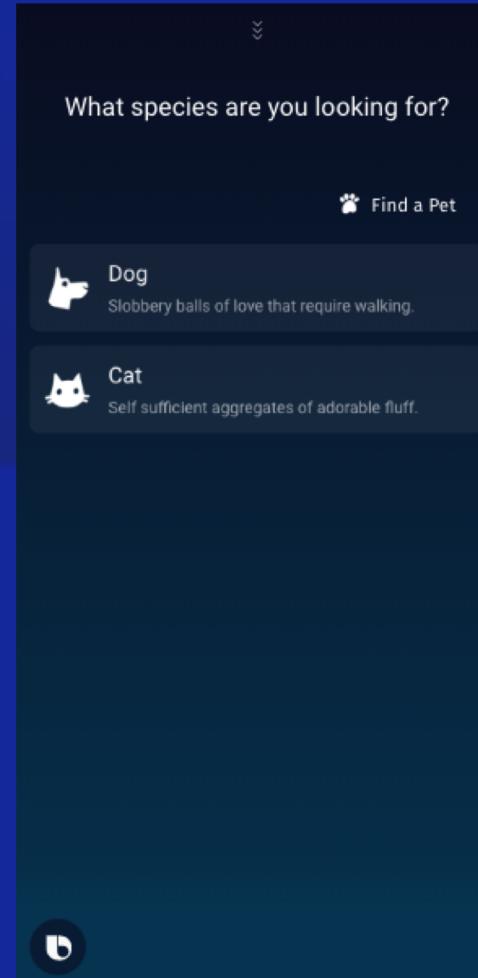
Helps collect an input from a user

## Input View

### Form Input

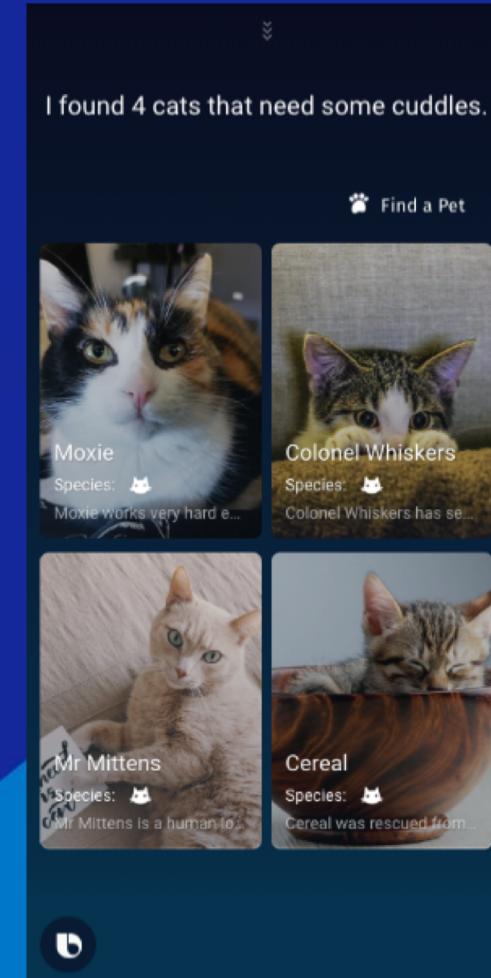


### Selection Input



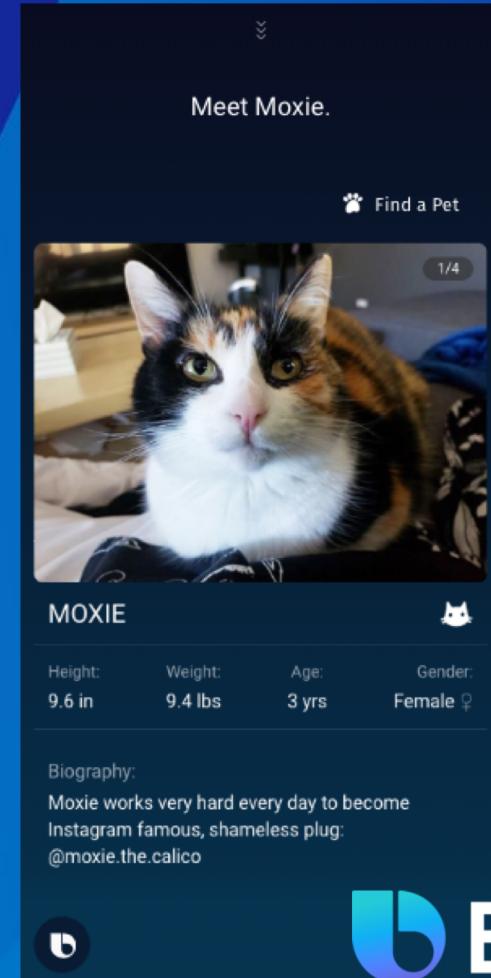
## Result View

### List View



Displays the results to the users

### Detailed View



# Why use Result Views?

List of 7 Pets

No Result View

I found these.

Find a Pet

0.1.0-example.result\_view\_tutorial\_completed.Pet  
0.1.0-example.result\_view\_tutorial\_completed.Pet  
0.1.0-example.result\_view\_tutorial\_completed.Pet  
0.1.0-example.result\_view\_tutorial\_completed.Pet  
0.1.0-example.result\_view\_tutorial\_completed.Pet  
0.1.0-example.result\_view\_tutorial\_completed.Pet  
0.1.0-example.result\_view\_tutorial\_completed.Pet



With Result View

I found 7 pets that need some cuddles.

Find a Pet



Click on a pet

No Result View

Here's what I found.

Find a Pet

0.1.0-example.result\_view\_tutorial\_completed.Pet  
age 3 yrs  
I Moxie works very hard every day to bec...  
gender Female ♀  
height 9.6  
image /images/moxie.jpg  
im... 0.1.0-example.result\_view\_tutorial\_...  
0.1.0-example.result\_view\_tutorial\_...  
0.1.0-example.result\_view\_tutorial\_...  
0.1.0-example.result\_view\_tutorial\_...  
interests Sitting on keyboards  
Maining Pikachu in SSBU  
Reading books ↗



Detailed View

With Result View

This is Moxie.

Find a Pet



1/4



Bixby

# List View vs Detailed View

## NL Utterance

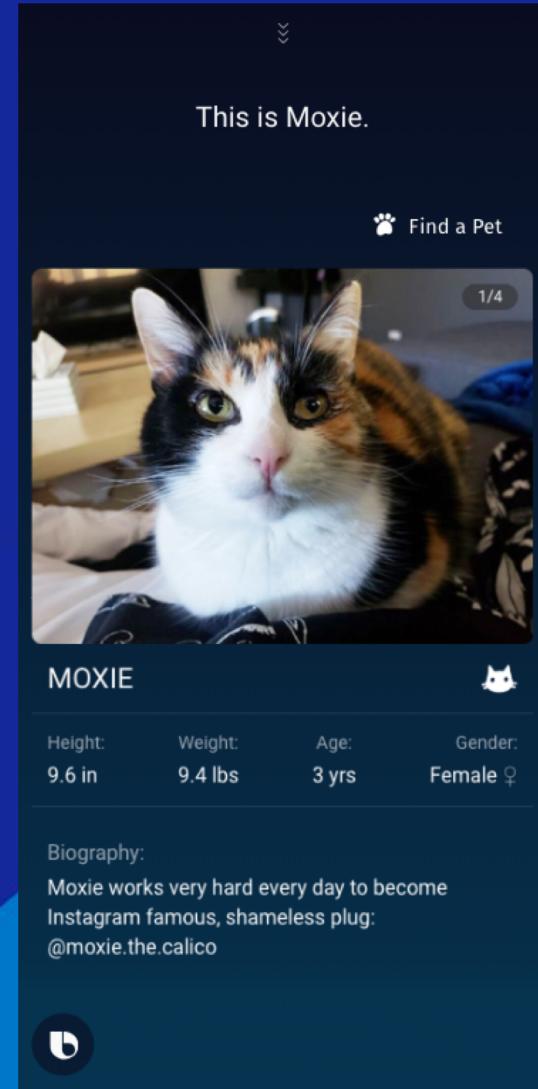
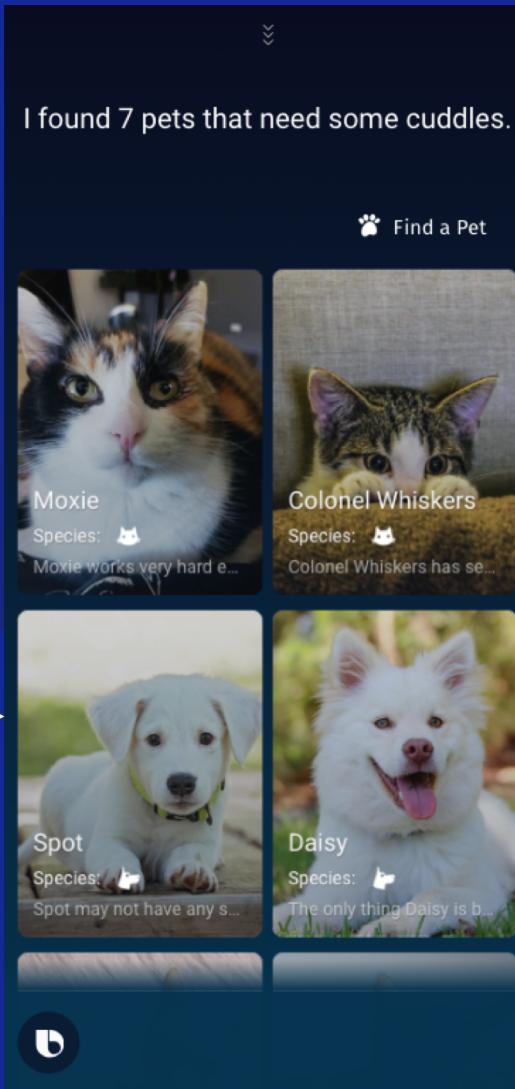
*"Show me some pets"*

Starts the action FindPets

## Action

FindPets

Since FindPets found multiple pets, Bixby shows a list view



## NL Utterance

*"Show me Moxie"*

Starts FindPets with Moxie as the name input

## Optional Input

Name

## Action

FindPets

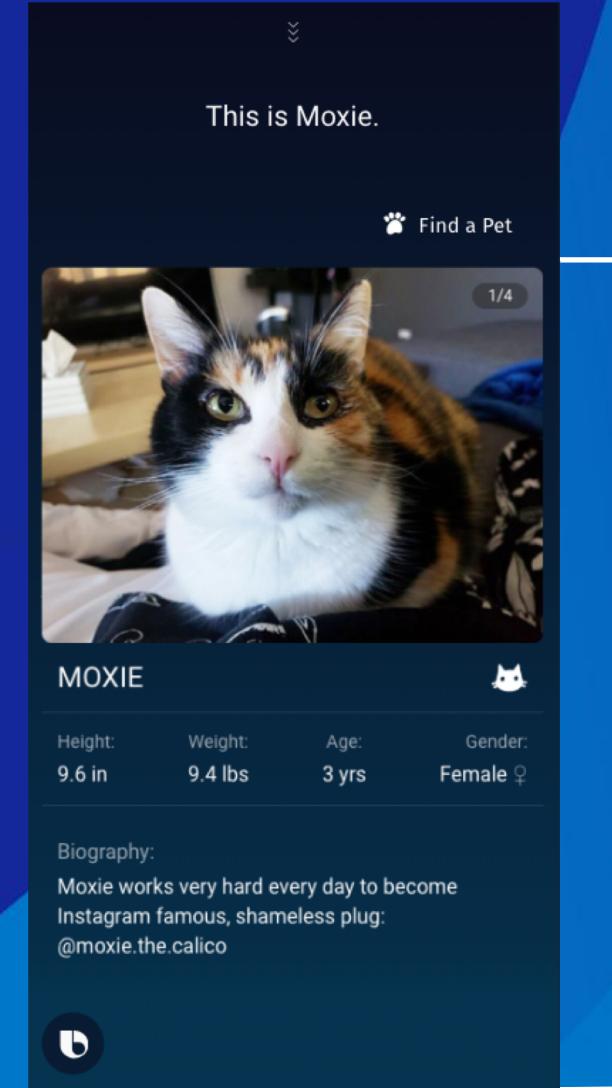
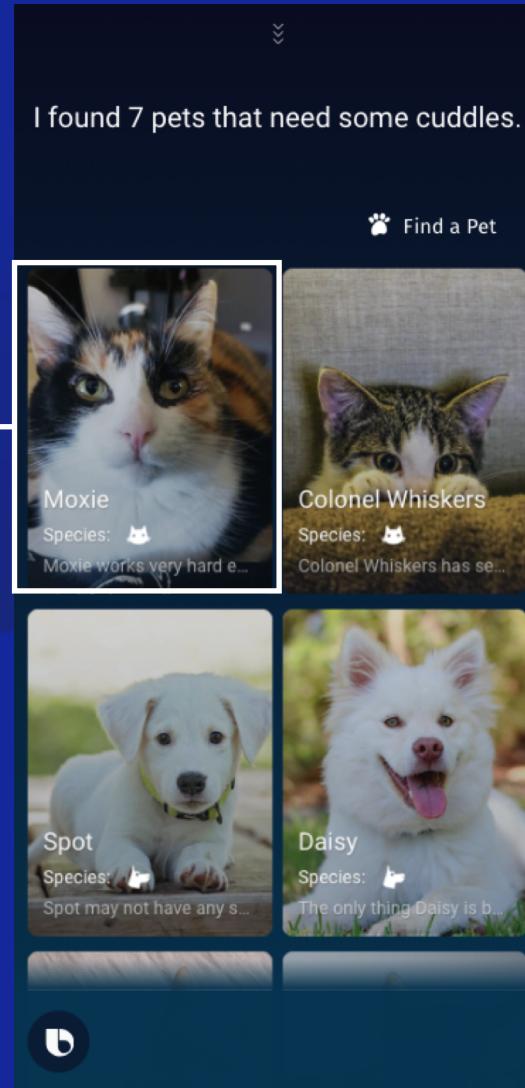
Since FindPets only found 1 pet with the name Moxie, it shows a detailed view

# Layout Macros

Layout macros are useful for fragmenting UI elements to be reusable and also help organize your code.

**Layout Macro**  
**pet-summary.layout.bxb**

Each tile is a pet-summary layout macro



**Layout Macro**  
**pet-details.layout.bxb**

This entire details page is a layout macro and only shows up when just 1 pet is found.

# Image and Text

Meet Moxie.

Find a Pet

MOXIE

Height: 9.6 in    Weight: 9.4 lbs    Age: 3 yrs    Gender: Female ♀

Biography:

Moxie works very hard every day to become Instagram famous, shameless plug:  
@moxie.the.calico

## image

Shows an image. Local images and web urls acceptable.

```
image: "/images/moxie.jpg",
```

Local image

## single-line

A single line of text. Can contain in-line images.

## paragraph

Good for more than 1 line of text. Supports \ escapes for quotes and line breaks.

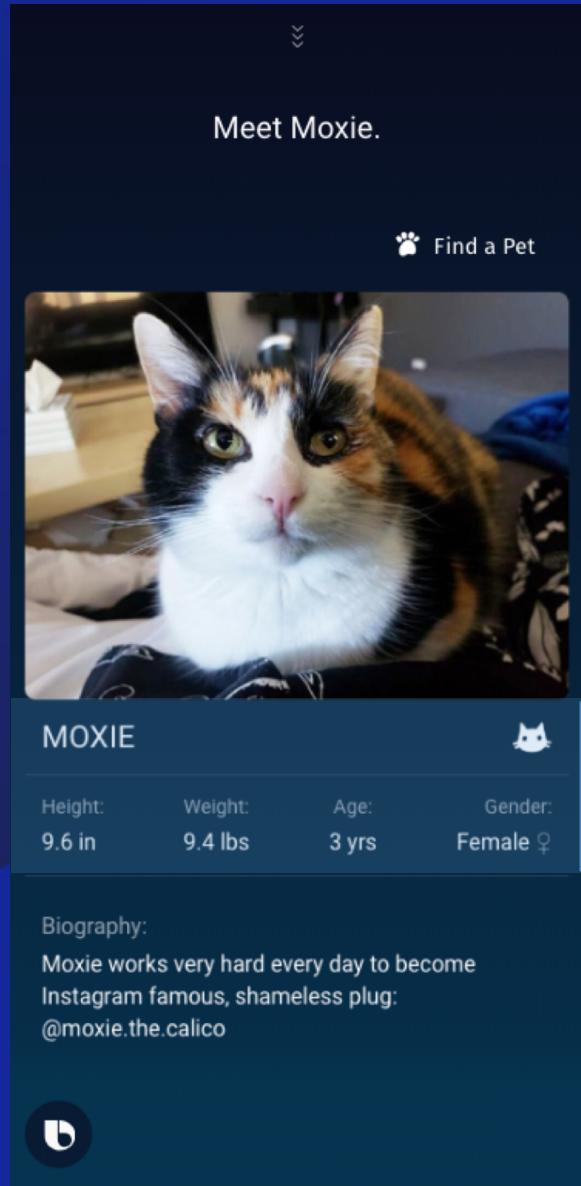
## single-line

Biography: \_\_\_\_\_  
Moxie works very hard every day to become  
Instagram famous, shameless plug:  
@moxie.the.calico

## paragraph

Detail text style makes it darker. Good for labels.

# Hbox and Vbox



hbox

A horizontal box.  
Contains vboxes.  
Great for showing  
stats.

vbox

A box in an hbox.  
Similar to html grid  
systems. Responsive.

vbox

text

vbox

single-line

This single-line contains  
only an image

MOXIE

Height:	Weight:	Age:	Gender:
9.6 in	9.4 lbs	3 yrs	Female ♀

Biography:  
Moxie works very hard every day to become  
Instagram famous, shameless plug:  
@moxie.the.calico

vbox

text  
text

vbox

text  
text

vbox

text  
text

vbox

text  
text

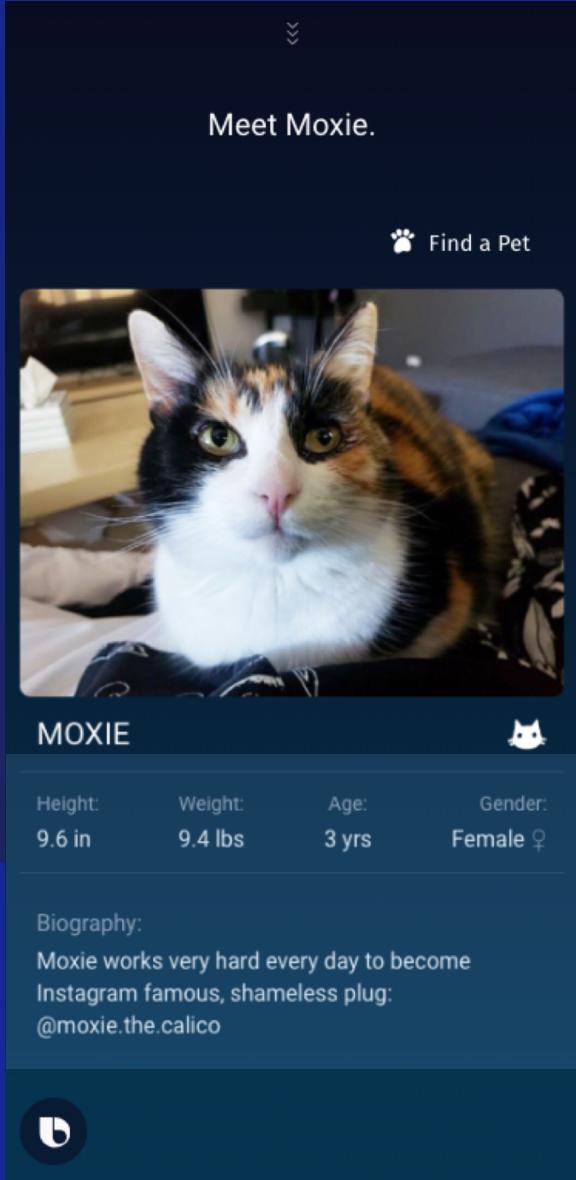
hbox

hbox

```
height: 9.6,  
weight: 9.4,  
age: '3 yrs',  
gender: "Female ♀",
```

 Bixby

# Dividers and Spacers



divider

A horizontal line. Great  
for adding visual  
separation between 2  
UI elements.

spacer

Creates a space of  
24px between 2 UI  
elements.

Height: 9.6 in    Weight: 9.4 lbs    Age: 3 yrs    Gender: Female ♀

Biography:  
Moxie works very hard every day to become  
Instagram famous, shameless plug:  
@moxie.the.calico

divider

divider

spacer

# For-Each

resides with her owner where she loves being irresistably cute, seeing how long she can stretch a single meow, and playing fetch with her human. Moxie loves cuddles, watching birds, and punching her evil doppelganger in the mirror.

Moxie's Instagram 

Interests:

Sitting on keyboards

Maining Pikachu in SSBU

Reading books 📖

Sleeping on her owner's face 😴

Asking for food at 4am



Click Me

Show me more cats!

Animals similar to these are always looking for a home at your local animal shelter. Although this is just a demo capsule, please consider donating to a local shelter and/or adopting a pet if you want to be unconditionally loved by an animal that just needs a warm family to call home.

Sincerely,  
Jon P.



## for-each

**Iterates through an array and renders something for each item in the array.**

interests: [

```
"Sitting on keyboards",
"Maining Pikachu in SSBU",
"Reading books 📖",
"Sleeping on her owner's face 😴",
"Asking for food at 4am",
],
```

The array of Moxie's interests that gets passed into the for-each loop.

Interests:

Sitting on keyboards

Maining Pikachu in SSBU

Reading books 📖

Sleeping on her owner's face 😴

Asking for food at 4am

# Cell-card with On-Click

resides with her owner where she loves being irresistably cute, seeing how long she can stretch a single meow, and playing fetch with her human. Moxie loves cuddles, watching birds, and punching her evil doppelganger in the mirror.

Moxie's Instagram 

Interests:

Sitting on keyboards

Maining Pikachu in SSBU

Reading books 

Sleeping on her owner's face 

Asking for food at 4am

 Click Me  
Show me more cats!

Animals similar to these are always looking for a home at your local animal shelter. Although this is just a demo capsule, please consider donating to a local shelter and/or adopting a pet if you want to be unconditionally loved by an animal that just needs a warm family to call home.

Sincerely,  
Jon P.



## cell-card

A clickable card with customizable slots.  
On-click can dispatch new goals.

slot1

Slot2

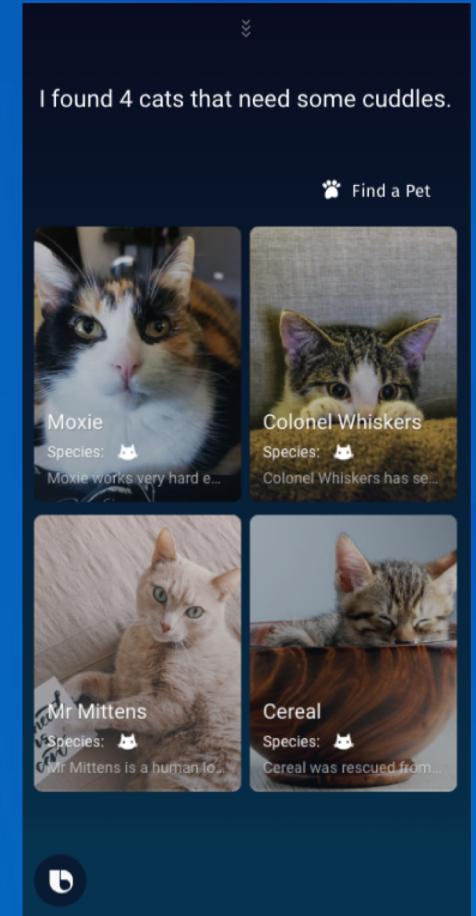


Click Me

Show me more cats!

\*click\*

Clicking on this initiates the FindPets action with the optional input species set to "cat".



# Miscellaneous

resides with her owner where she loves being irresistably cute, seeing how long she can stretch a single meow, and playing fetch with her human. Moxie loves cuddles, watching birds, and punching her evil doppelganger in the mirror.

Moxie's Instagram 

Interests:

Sitting on keyboards

Maining Pikachu in SSBU

Reading books 

Sleeping on her owner's face 

Asking for food at 4am



Click Me

Show me more cats!

Animals similar to these are always looking for a home at your local animal shelter. Although this is just a demo capsule, please consider donating to a local shelter and/or adopting a pet if you want to be unconditionally loved by an animal that just needs a warm family to call home.

Sincerely,  
Jon P.



Moxie's Instagram 

\*click\*

Clicking on this punches out to Moxie's Instagram

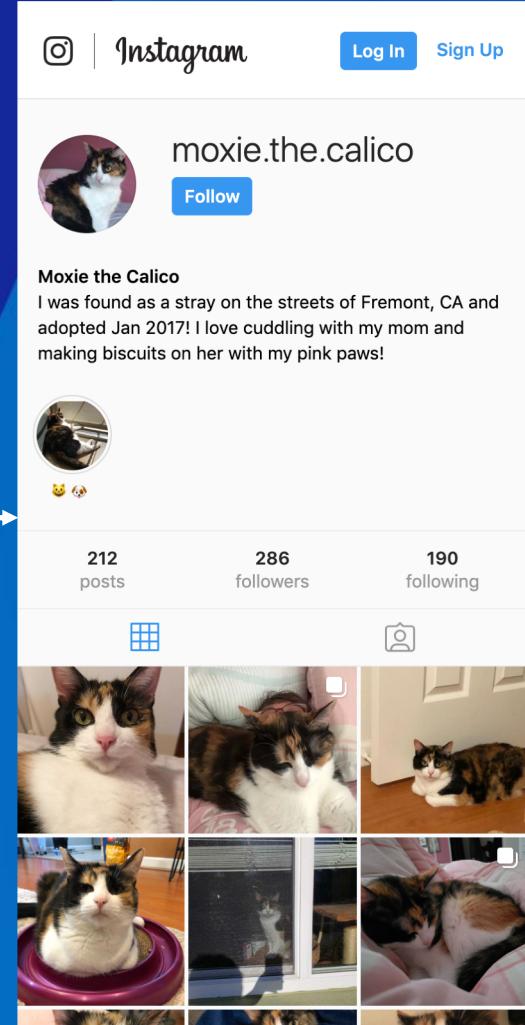
## attribution-link

Punch-out link. Opens the default browser if a URL is supplied.

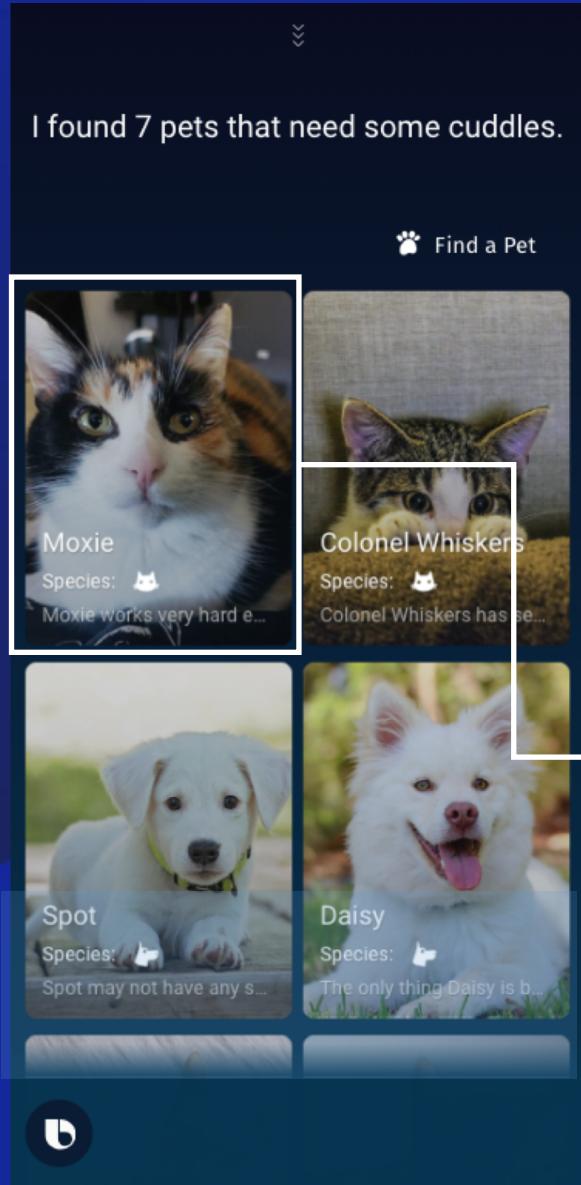
Legal styled text is small and faint

Animals similar to these are always looking for a home at your local animal shelter. Although this is just a demo capsule, please consider donating to a local shelter and/or adopting a pet if you want to be unconditionally loved by an animal that just needs a warm family to call home.

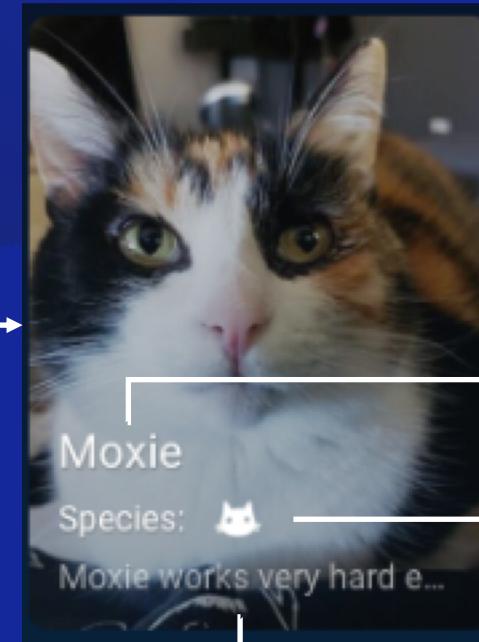
Sincerely,  
Jon P.



# Image-Card



**image-card**  
Shows an image with  
3 slots to put text /  
single-lines into.



**Image background**

Aspect ratio can affect how many are in a column. You can also manually set the number of image-cards in a row with column-size.

**slot1**

Text of pet's name

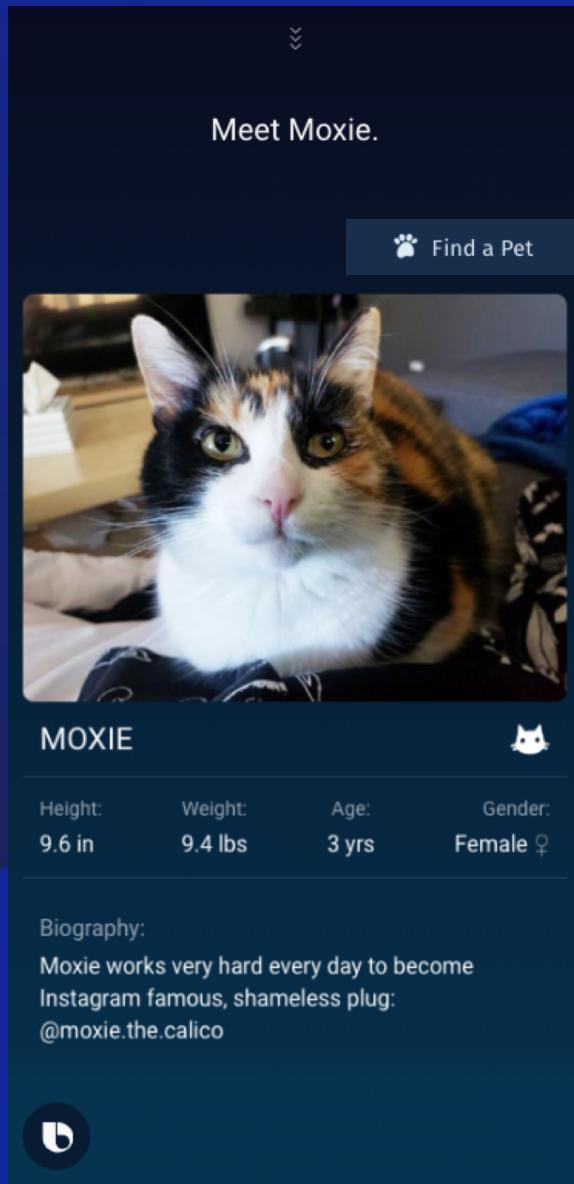
**slot2**

Single-line with an in-line image

**slot3**

Text of pet's biography

# Dialog and Capsule Name



Set the dialog in the message key in the view or a dialog.bxb file.  
Displays what is read to the user.  
Use the *speech* key to read something different from what's displayed.

Find a Pet

Set the icon and display name in capsule-info.bxb  
As of August 2019, icons must be .png and .jpg format  
This icon is cropped in a circle

# Useful Links

It can be hard to find what you need in the documentation.  
Here is what I commonly use for UI/UX purposes.

## Result View UI Elements:

<https://bixbydevelopers.com/dev/docs/reference/type/layout.content.section.content>

Search “*content.section.content*”

## Expression Language Reference:

<https://bixbydevelopers.com/dev/docs/reference/ref-topics/el-ref#formatting-functions>

Search “*expression language reference*” (3<sup>rd</sup> result)

## More Result Views

<https://github.com/bixbydevelopers/capsule-samples-collection/tree/master/bixby-views>

Has a lot of useful card component examples

