

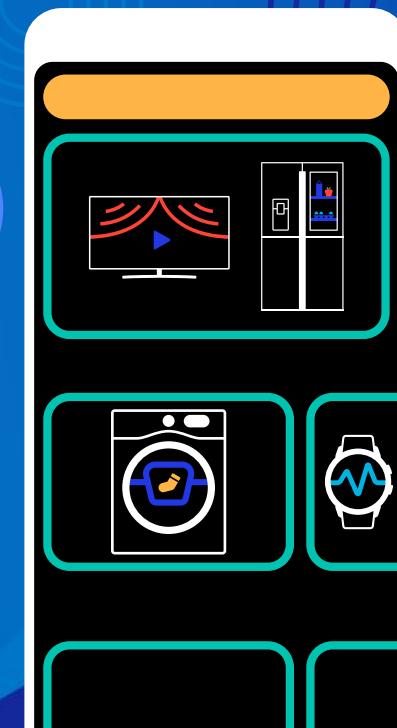
# Get to Know Bixby

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# Two Bixby Webinars

**Today**

## *Get to Know Bixby*

- Bixby reach/opportunity
- Bixby Tech
- How to get started
- Marketplace high level

**August 6th**

## *Opportunities and Marketplace*

- More Bixby Development
- Marketplace – “How to be successful”- tips, tricks and traps.
- And more . . .
- Register here:

# What Is Bixby?

- Samsung's Voice/Conversational AI assistant
- Bixby 2 introduced last November – based on Viv Labs Technology
- Viv Labs – Acquired by Samsung 2 years ago
- Story starts with Siri
  - Dag Kittlaus and Adam Cheyer founded Siri
  - Sold to Apple - worked there for a couple years
  - Left to create a next generation conversational AI platform and founded Viv Labs
  - Samsung bought Viv Labs in late 2016

# Bixby Reach

- #1 in Smartphones
- #1 in Televisions
- #1 in US Appliances
- 70% of US Households have a Samsung device
- Significant market share in portable speakers/automotive via Harman
- Bixby coming to all of the above and more . . .

# Bixby Reach

500 Million Bixby Enabled  
Devices per Year



 Bixby

# Bixby Development

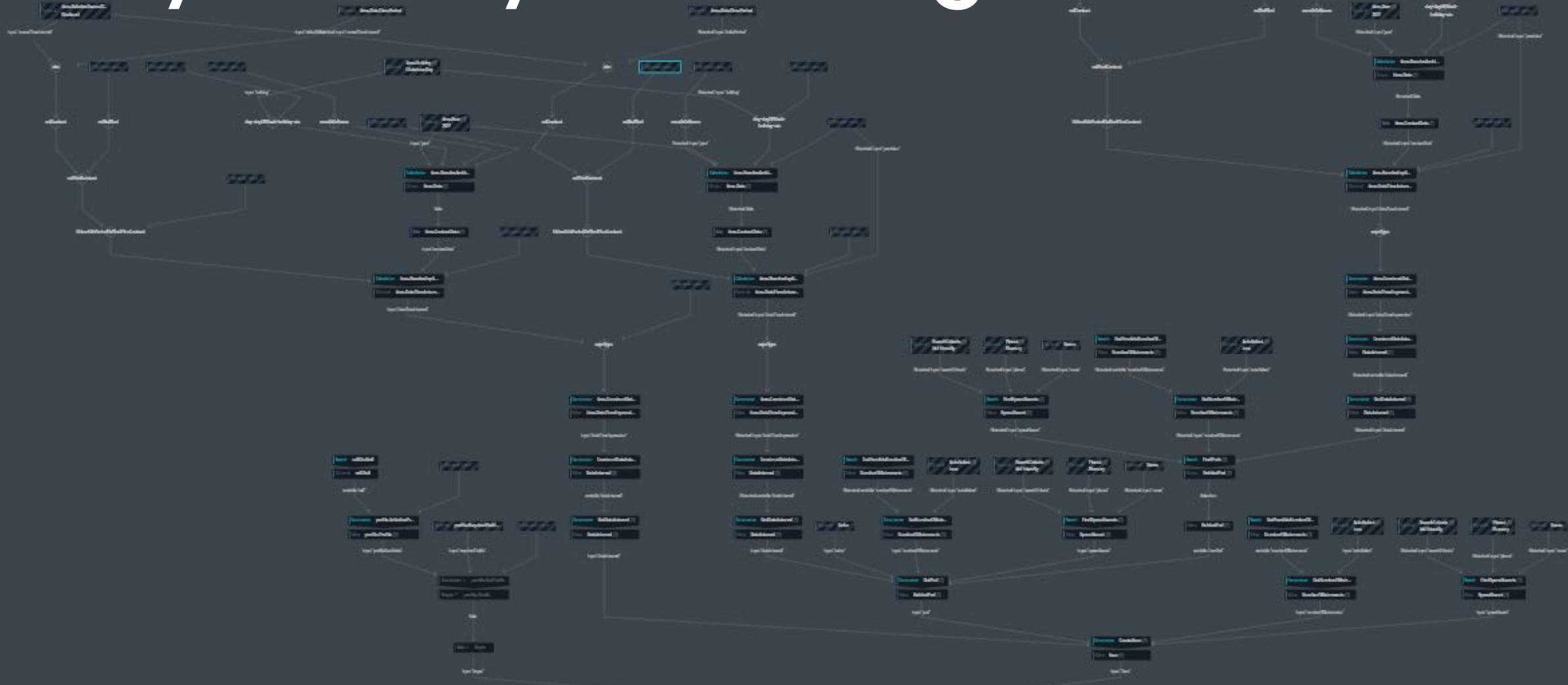
# Bixby Development – Model Driven

- Bixby is a declarative, model driven development paradigm vs Imperative, code first development
- The model handles the “plumbing”
- And provides consistency – VUX standards
- Developer focuses time, energy and creativity on the business logic – what differentiates your capsule (voice app or “skill” in Bixby terminology)

# Bixby Development - AI Driven

- Bixby models are “compiled” into programs on the fly – Dynamic program generation
- Model and Dynamic program generation handle
  - NLU (Natural language understanding)
  - Required and optional inputs, computed inputs and eliciting input from user.
  - Flows
  - Output variables, speech and UI layout
  - Errors, retries and related user messaging
- A fraction of typical code is written for a Bixby Capsule

# Bixby Dev - Dynamic Program Generation



# Bixby Dev - Contextually Aware/Personalization

- Bixby has contextual awareness
  - Understand the conversation
  - Smart continuations
- Powerful personalization capabilities
  - Preference Learning: Remember my preferences based on behavior and context
  - Selection learning: Learn selections made by the user/all users – contextually aware
  - All model driven – no code required

# Bixby Dev - Multimodal

- Voice only apps are very good
- Multi-modal = the frosting on the cake
- Built in multi-modal capabilities – not add on
- Bixby Views – UI framework that scales - Watches to TV's

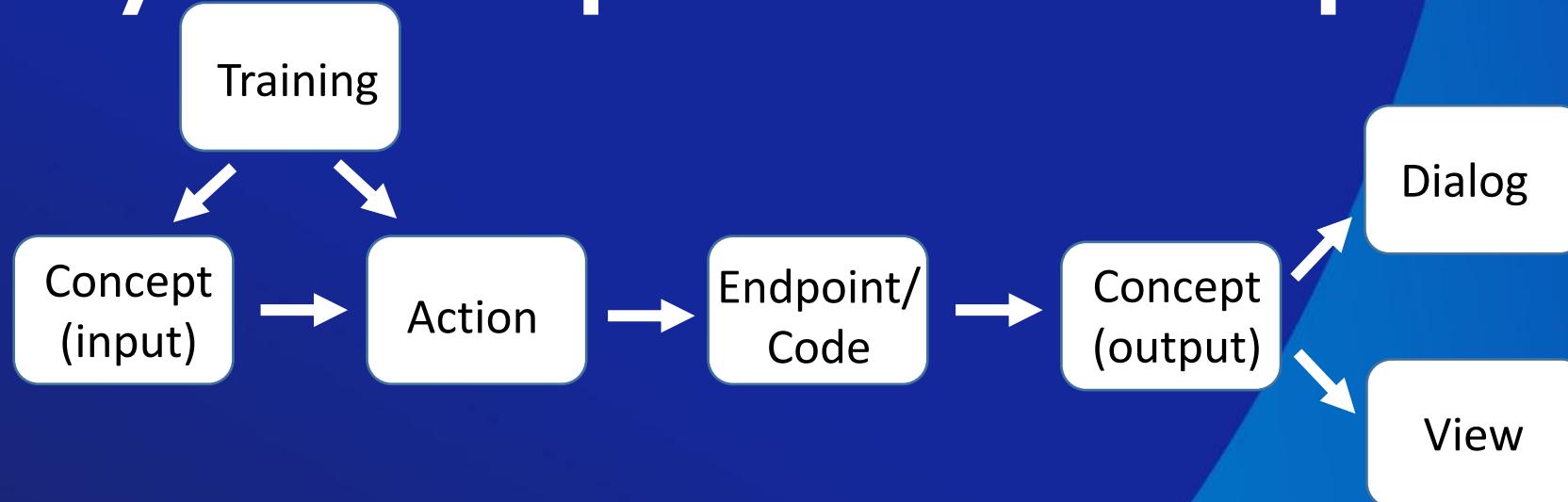
# Bixby Dev - Level Playing Field

- Bixby Developer Tools –  
[www.bixbydevelopers.com](http://www.bixbydevelopers.com)
- Same tools used internally
- No special access/tools internally
- Level playing field – a big differentiator

# How to Start Developing for Bixby



# Bixby Development - Components



- *Training*: NLU Utterance (Utterances/Training phrases)
- *Concept*: Input (and output) Objects (Slot/Entity)
- *Action*: Method (Intent)
- *Endpoint/Code*: Business Logic (Lambda/Webhook/Cloud Function)
- *Dialog*: Output Speech/Text (`response.speak`, `speech`)
- *View*: Formatted UI (APL, Card, Rich Responses)

# Bixby Development - Model Example

```
action (getUserInfo) {  
    type (Search)  
    description (Get user info for capsule)  
    collect {  
        input (firstName) {  
            type (contact.FirstName)  
            min (Required) max (One)  
        }  
        input (lastName) {  
            type (contact.LastName)  
            min (Optional) max (One)  
        }  
        input (birthday) {  
            type(contact.BirthdayInfo)  
            min (Required) max (One)  
        }  
    }  
    output (User)
```

Action (method, intent) that:

- Requires: firstName and birthday
- Optional: lastName

Natural language training utterances pick up  
input / UI forms or both

Bixby NLU get data from the utterance and elicit  
missing required input automatically – via voice /  
UI forms or both

# Bixby Development - IDE

- [www.bixbydevelopers.com](http://www.bixbydevelopers.com)
- Bixby Developer Studio IDE - Single IDE for all Bixby development
  - Modeling
  - Code (JavaScript)
  - NLU Modeling
  - Simulator
  - Debugger
  - Unit Testing

# Bixby Development - Tutorials & Sample Code

- Start with Dice sample capsule – Quick Start Guide  
[bixbydevelopers.com](http://bixbydevelopers.com)
- Watch the Bixby 101 and Coding with Adam videos  
[bit.ly/BixbyVideos](http://bit.ly/BixbyVideos)
- Github – [github.com/bixbydevelopers](http://github.com/bixbydevelopers)

# Bixby Development Fact Capsule

- Simple capsule for facts or jokes
- Start with copy and paste – use spreadsheet to create content
- Customize with NLU training and tags (search terms)

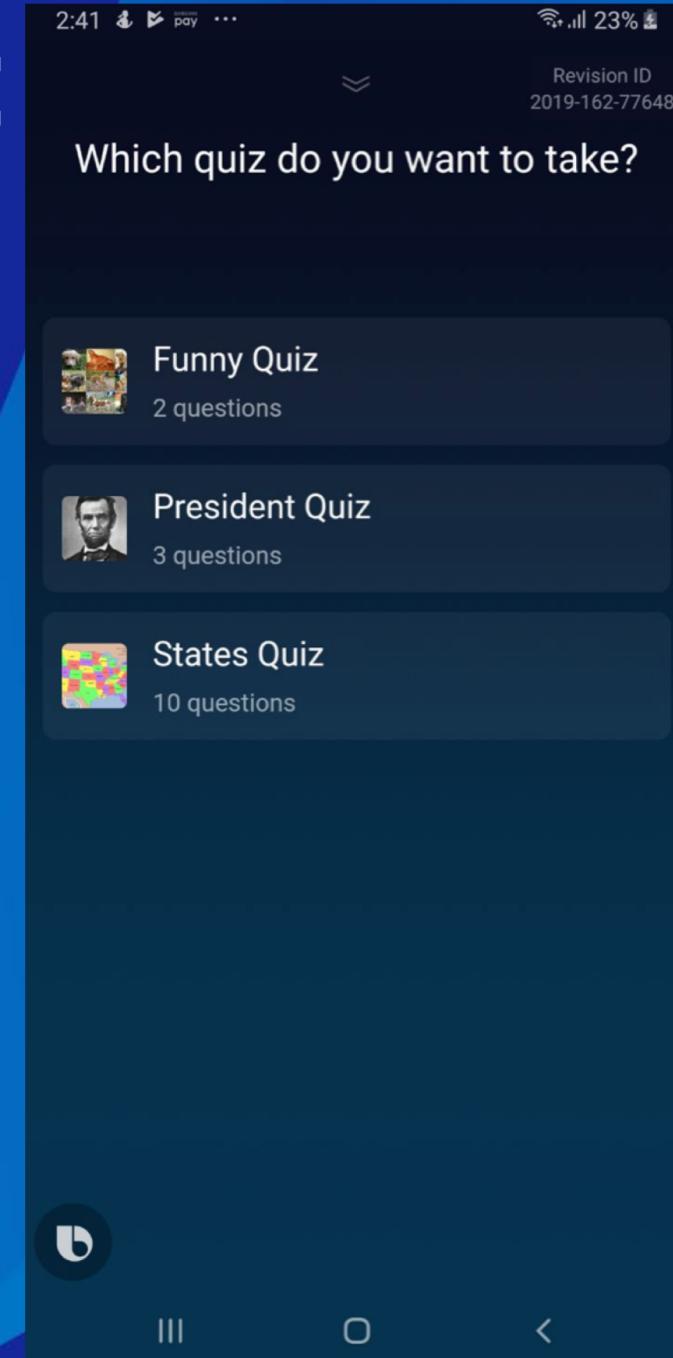
<https://github.com/bixbydevelopers/capsule-sample-fact>



# Bixby Development Quiz Capsule

- Simple capsule – simple quiz
- Start with copy and paste – use spreadsheet to create content
- Customize

<https://github.com/bixbydevelopers/capsule-sample-quiz>



# Bixby Development - Sample Capsules

- Cookbook of sample capsules
- Learn concepts
- Augment the documentation



## Bixby

### Bixby Sample Capsules Collection

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#### Overview

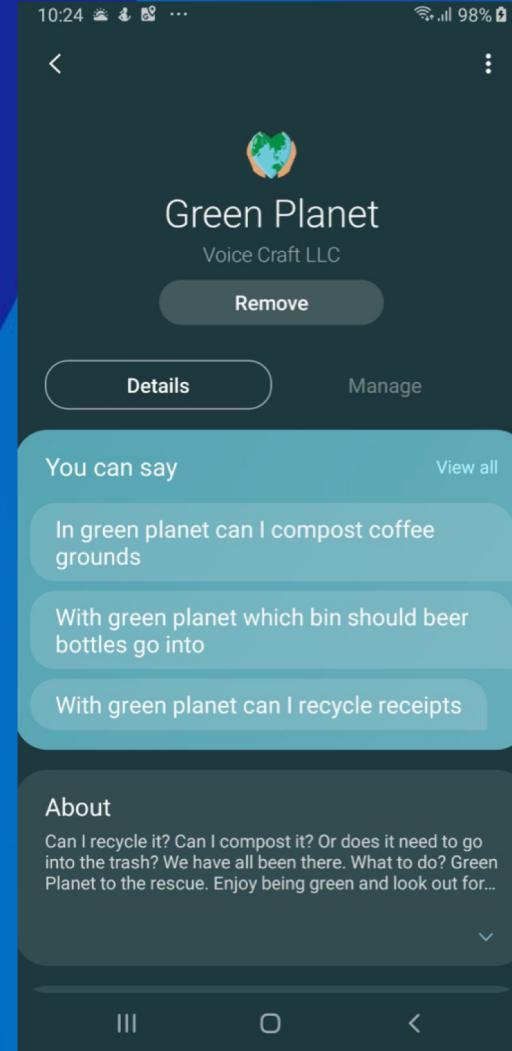
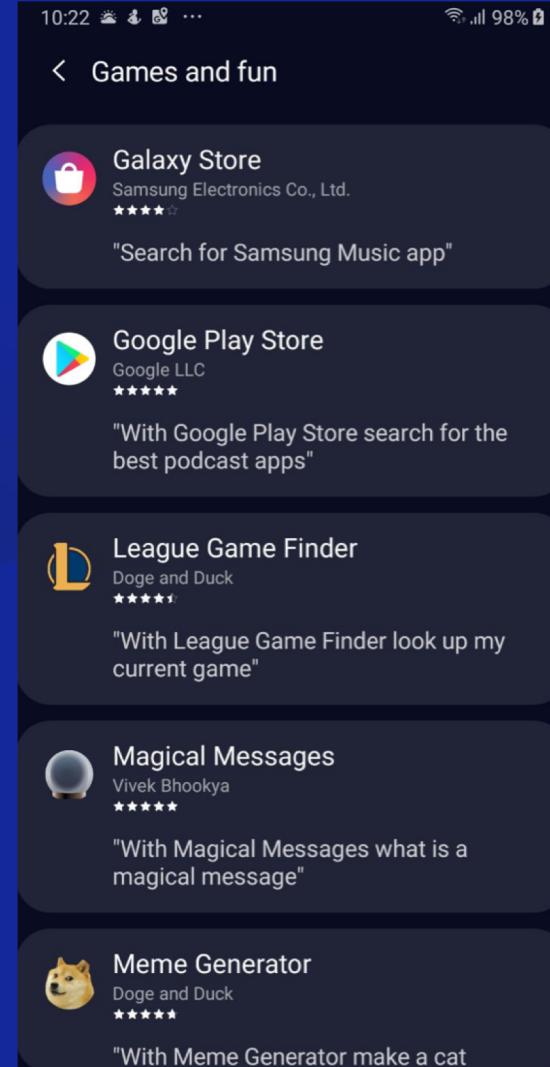
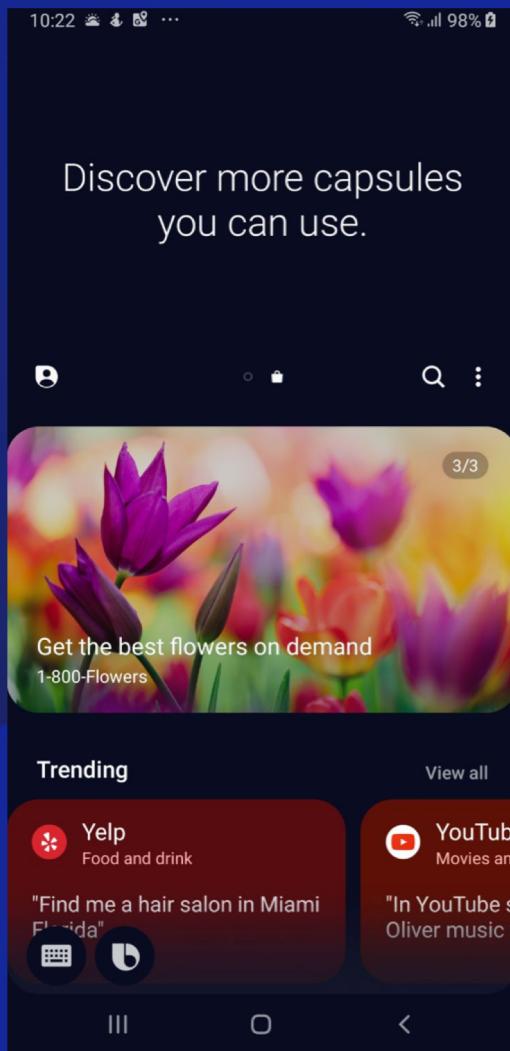
A collection of sample Bixby capsules which are individual capsules that show how to use a single platform feature. See <https://bixbydevelopers.com/dev/docs/sample-capsules/samples>

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#### Capsule Samples

[Audio Player](#) - Audio Player  
[Bixby Views](#) - Sample Result UI Views  
[Continuation for Training](#) - Sample Continuations  
[Dialog Affirmation](#) - Dialog Variances  
[Error Handling](#) - Sample Error Handling  
[HTTP API Calls](#) - Sample HTTP Calls  
[Input Forms](#) - Sample Input Forms  
[Location Search](#) - Sample Use of Locations  
[Match Patterns](#) - Sample Match Patterns for Result Views  
[Preference Learning](#) - Sample Preference Learning (Personalization)  
[Refreshing Content](#) - Sample Content Refresh  
[Selection Learning](#) - Sample Selection Learning (Personalization)  
[User Context](#) - Sample User Data Access

# Bixby Marketplace



 **Bixby**

# Bixby Marketplace

- Conceptually Similar to other Voice App Stores/App Stores
- Refine and polish capsule till ready and then submit
- Metadata e.g. icon, description, categories etc shown in marketplace
- Review process – please ensure
  - Works
  - Required metadata included
  - Dispatch name follows rules

# Bixby Premier Developer

- Partner Program
- Partners have had success in other voice platforms
- Port your experience to Bixby and take advantage of the unique Bixby features
- White glove support
- Loaner Devices
- Adam Cheyer's insight on building a voice/AI startup

<http://bixby.partners>



# Bixby Webinar #2

Please join us for the next Bixby Webinar on August 6<sup>th</sup> for:

- More Bixby Tech
- Marketplace Success – tips, tricks and traps
- And more. . . .

Register Today

# Thank you & Questions

Roger Kibbe | Senior Developer Evangelist | Twitter: @rogerkibbe