



# ADVANCED BUILDING APPS FOR APPLE TV

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# Introduction

- Bachelors in Computer Engineering from Georgia Tech and an MBA from Georgia State.
- Software development, primarily in the retail and food service technology space.
- Independent contractor, focusing entirely developing software for the mobile platform.



# Agenda

- ❑ Xcode 9 beta 5 / iOS & tvOS 11
- ❑ Anyone here for last year's Apple TV presentation?  
Anyone already developed their own Apple TV app?
- ❑ Extending iOS Applications
- ❑ Disk Storage & CloudKit
- ❑ User Experience
- ❑ Resources
- ❑ Q&A

# Extending iOS Applications

- Many classes can be shared between iOS and tvOS. Interfaces, Utilities, etc.
- xibs cannot be shared between the two platforms. But, you can share their underlying class.
- Let's look at some code to examine some short cuts for sharing xib layouts (as much as we can).

# Disk Storage & CloudKit

- User defaults work the same as iOS.
- Note that tvOS doesn't support iCloud Documents.
- Apple provides two shared storage options for Apple TV: iCloud Key-Value Storage (KVS) and CloudKit.
  - KVS (<1MB)
  - CloudKit (>1MB)
- ODR - On-Demand Resources

# Disk Storage & CloudKit

- Setup
  - Sign into iCloud on simulators
    - Enable iCloud Drive on iOS simulator
  - Background fetch
  - Remote notifications
- iCloud
  - Specify container
  - `fileManager.ubiquityIdentityToken` not available on tvOS and watchOS. KVS is not available at all on watchOS.
  - A note about entitlements
- Let's look at some code!

# User Experience

- Focus Engine
- Overscan
  - tvOS 10
    - UIScrollView.overscanCompensationInsets
  - tvOS 11
    - UIView.safeAreaInsets
    - UIView.safeAreaLayoutGuide
    - UIViewController.additionalSafeAreaInsets
    - Opting-out
      - view.insetsLayoutMarginsFromSafeArea = false
      - viewController.viewRespectsSystemMinimumLayoutMargin = false
      - scrollView.contentInsetAdjustmentBehavior = .never

# User Experience

- Buttons

- tvOS 10

- UIButtonTypeSystem

- tvOS 11

- UIButtonTypePlain
      - No background blur - Full customization

- Images

- tvOS 11

- UIImageView.overlayContentView
    - UIImageView.overlayContentView.clipsToBounds = true / false
      - Add additional views here. Really cool!

- Blur

- viewController.modalPresentationStyle.blurOverFullScreen



# Resources

- WWDC2016
  - <https://developer.apple.com/videos/play/wwdc2016/231/>
- WWDC2017
  - <https://developer.apple.com/videos/play/wwdc2017/209/>
  - <https://developer.apple.com/videos/play/wwdc2017/224/>
- <http://www.lowyoyo.com>
- [https://github.com/justindomnitz/iDev2016\\_tvOS](https://github.com/justindomnitz/iDev2016_tvOS)
- [https://github.com/justindomnitz/iDev2017\\_tvOS](https://github.com/justindomnitz/iDev2017_tvOS)
- <http://stackoverflow.com/users/4877241/justin-domnitz>

# Q&A

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# Overview

- Extending your application to the Apple TV is not a straightforward task. Will look at some common iOS paradigms and how those can be reworked for Apple TV.
- The Apple TV handles disk storage differently than other iOS devices. We'll work with CloudKit to understand and leverage this new space-saving on-demand data access.
- The Apple TV provides an enormous canvas for you applications. It also provides limited user input. We'll explore how best organize our apps for the best user experience.
- Having a basic understanding of Swift programming and Apple TV development is a recommended prior to attending this talk.