Framework

Speech

Perform speech recognition on live or prerecorded audio, and receive transcriptions, alternative interpretations, and confidence levels of the results.

iOS 10.0+ │ iPadOS 10.0+ │ Mac Catalyst 13.1+ │ macOS 10.15+ │ visionOS 1.0+

Overview

Use the Speech framework to recognize spoken words in recorded or live audio. The keyboard's dictation support uses speech recognition to translate audio content into text. This framework provides a similar behavior, except that you can use it without the presence of the keyboard. For example, you might use speech recognition to recognize verbal commands or to handle text dictation in other parts of your app.

The `SpeechTranscriber` class and other module classes provide specific services. The `Asset Inventory` class ensures that the system has the assets necessary to support those classes. The `SpeechAnalyzer` class manages an analysis session that uses those classes.

For a general understanding of how you use these classes together, see `SpeechAnalyzer`.

Topics

Essentials

`{}` Bringing advanced speech-to-text capabilities to your app

Learn how to incorporate live speech-to-text transcription into your app with SpeechAnalyzer.

`actor` `SpeechAnalyzer`

Analyzes spoken audio content in various ways and manages the analysis session.

class AssetInventory

Manages the assets that are necessary for transcription or other analyses.

Modules

class SpeechTranscriber

A speech-to-text transcription module that's appropriate for normal conversation and general purposes.

class DictationTranscriber

A speech-to-text transcription module that's similar to system dictation features and compatible with older devices.

class SpeechDetector

A module that performs a voice activity detection (VAD) analysis.

protocol SpeechModule

Protocol that all analyzer modules conform to.

protocol LocaleDependentSpeechModule

A module that requires locale-specific assets.

Input and output

struct AnalyzerInput

Time-coded audio data.

protocol SpeechModuleResult

Protocol that all module results conform to.

Custom vocabulary

class AnalysisContext

Contextual information that may be shared among analyzers.

class SFSpeechLanguageModel

A language model built from custom training data.

class Configuration

An object describing the location of a custom language model and specialized vocabulary.

```
class SFCustomLanguageModelData
```
An object that generates and exports custom language model training data.

Asset and resource management

```
class AssetInstallationRequest
```
An object that describes, downloads, and installs a selection of assets.

```
enum SpeechModels
```
Namespace for methods related to model management.

Legacy API

≔ Speech Recognition in Objective-C

Use these classes to perform speech recognition in Objective-C code.