

[Vision](#) / TrackHomographicImageRegistrationRequest

## Class

# TrackHomographicImageRegistrationRequest

An image-analysis request that you track over time to determine the perspective warp matrix necessary to align the content of two images.

iOS 18.0+ | iPadOS 18.0+ | macOS 15.0+ | tvOS 18.0+ | visionOS 2.0+

```
final class TrackHomographicImageRegistrationRequest
```

## Overview

This request generates an [ImageHomographicAlignmentObservation](#) object that describes the matrix data the request detects.

## Topics

### Creating a request

```
init(TrackHomographicImageRegistrationRequest.Revision?, frameAnalysis  
Spacing: CMTIME?)
```

Creates an image-alignment tracking request to determine the warp matrix.

### Getting the revision

```
let revision: TrackHomographicImageRegistrationRequest.Revision
```

The algorithm or implementation the request uses.

```
static let supportedRevisions: [TrackHomographicImageRegistration  
Request.Revision]
```

The collection of revisions the request supports.

```
enum Revision
```

A type that describes the algorithm or implementation that the request performs.

## Performing a request

```
func perform(on: URL, orientation: CGImagePropertyOrientation?) async  
throws -> Self.Result
```

Performs the request on an image URL and produces observations.

**Required** Default implementations provided.

```
func perform(on: Data, orientation: CGImagePropertyOrientation?) async  
throws -> Self.Result
```

Performs the request on image data and produces observations.

**Required** Default implementations provided.

```
func perform(on: CGImage, orientation: CGImagePropertyOrientation?)  
async throws -> Self.Result
```

Performs the request on a Core Graphics image and produces observations.

**Required** Default implementations provided.

```
func perform(on: CVPixelBuffer, orientation: CGImagePropertyOrientation  
?) async throws -> Self.Result
```

Performs the request on a pixel buffer and produces observations.

**Required** Default implementations provided.

```
func perform(on: CMSampleBuffer, orientation: CGImageProperty  
Orientation?) async throws -> Self.Result
```

Performs the request on a Core Media buffer and produces observations.

**Required** Default implementations provided.

```
func perform(on: CIImage, orientation: CGImagePropertyOrientation?)  
async throws -> Self.Result
```

Performs the request on a Core Image image and produces observations.

**Required** Default implementations provided.

```
struct ImageHomographicAlignmentObservation
```

An object that represents a perspective warp transformation.

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## Relationships

### Conforms To

CustomStringConvertible  
Equatable  
Hashable  
ImageProcessingRequest  
Sendable  
SendableMetatype  
StatefulRequest  
TargetedRequest  
VisionRequest

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## See Also

### Image alignment

`class` TrackTranslationalImageRegistrationRequest

An image-analysis request that you track over time to determine the affine transform necessary to align the content of two images.

`protocol` TargetedRequest

A type for analyzing two images together.