

```
import Foundation
```

```
/**
```

```
 * MLPredictionOptions
```

```
 *
```

```
 * An object to hold options / controls / parameters of how
```

```
 * model prediction is performed
```

```
 */
```

```
@available macOS 10.13
```

```
open class MLPredictionOptions : NSObject
```

```
    /// Set to YES to force computation to be on the CPU only
```

```
@available 10.13
```

```
12.0
```

```
open var usesCPUOnly : Bool
```

```
/**
```

```
 * @abstract Propose the model to use the specified backing objects for the
```

```
 * output feature values.
```

```
 *
```

```
 * @discussion Use the property to get the inference result directly into the
```

```
 * client allocated buffer when possible for efficient memory management.
```

```
 *
```

```
 * The property is a dictionary of the feature name and the output backing
```

```
 * object.
```

```
 *
```

```
 * The framework may not use the specified backing object and instead  
allocates
```

```
 * one by itself if the outputBacking dictionary doesn't contain the entry for
```

```
 * the feature name, the model doesn't support the user allocated buffers, or  
in
```

```
 * the batch prediction mode. To check if the backing object was used,
```

```
compare
```

```
 * the output prediction and the backing object by object identity.
```

```
 *
```

```
 * \code
```

```
 * CVPixelBufferRef outputBacking = ...;
```

```
 * [options setOutputBackings:@{@"outputImage" : (__bridge  
id)outputBacking}];
```

```
 * id<MLFeatureProvider> prediction = [model  
predictionFromFeatures:inputFeatures options:options error:&error];
```

```
 * if ([prediction valueForKey:@"outputImage"].imageBufferValue  
== outputBacking) {
```

```
 *     // backing was used.
```

```
 * }
```

```
 * else {
```

```
 *     // backing was NOT used.
```

```
 * }
```

```
 * \endcode
```

```
 *
```

```
 * The backing object must be either CVPixelBuffer or MLMultiArray
```

depending on

- \* the feature value type.

- \*

MLMultiArray

by not

methods before the

- \* prediction.

- \*

- \* The framework ignores a backing object with an unknown feature name.

- \*

- \* For the best performance, use page-aligned address in MLMultiArray.

- \*

- \* \code

- \* **#import** <mach/vm\_page\_size.h>

- \* :

- \* void \*backingBuffer = aligned\_alloc(vm\_page\_size, round\_page(backingBufferSize));

- \* if (backingBuffer == NULL) { ... error handling ... }

- \* MLMultiArray \*outputBacking = [[MLMultiArray alloc]

initWithDataPointer:(char \*)backingBuffer

- \*

...

- \*

dealloc:^(void \*) { free(backingBuffer); }

- \*

... ];

- \* \endcode

- \*

CVPixelBuffer

for

- \* memory footprint and performance, especially when the pixel buffers are

- \* subsequently used for playback or export. (See also

AVSampleBufferDisplayLayer

- \* and AVAssetWriter.)

- \*

- \* The output backing object must satisfy the output feature description's

prediction

- \* `-isAllowedValue:` test, or the framework reports an error at the

may be

- \* time. The exception is FP16 MLMultiArray backed by CVPixelBuffer, which

- \* accepted in Double or Float32 multi array output feature depending on the

- \*

- \*/

@available macOS 11.0

open var outputBackings String Any

