Sensifai HiAI Video Tagging Library User Manual

Steps to add the library to your Android Studio project:

1. Add the library file to your project:
   a) Click **File > New > New Module**.
   b) Click **Import .JAR/.AAR Package** then click Next.
   c) Enter the location of the Sensifai HiAI Tagging Library AAR file (**tagging.aar**) then click Finish.
2. Make sure the library is listed at the top of your **settings.gradle** file, as shown here:

```
include ':app', ':tagging'
```

3. Open the app module's **build.gradle** file and add two new lines to the dependencies block as shown in the following snippet:

```
dependencies {
    ....
    implementation 'com.writingminds:FFmpegAndroid:0.3.2'
    implementation project(":tagging")
}
```

4. Wherever you want to use the library, add these imports at the top of your java file:

```
import com.sensifai.hiai.tagging.Tagging;
import com.sensifai.hiai.tagging.TaggingProcessHandler;
import com.sensifai.hiai.tagging.TaggingResult;
import com.sensifai.hiai.tagging.TagInfo;
```

Additional considerations when using the library:

Because of the using FFmpegAndroid library to capture video frames efficiently, ***READ_EXTERNAL_STORAGE*** and ***WRITE_EXTERNAL_STORAGE*** permissions are required and should be requested by your app. Please check the accompanying example for further details.

Interface of the library:

There are just three static functions to call on ***Tagging*** class:

- ***init(Context context)***

  This function loads the models and prepares library to process videos. It should be called before all other functions.

Context can be accessed by calling ***getApplicationContext*** or simply passing current ***Activity*** instance. Use latter if you want to initialize Tagging library in one Activity and use it in other Activities.

- ***release()***
  This function unloads the models and frees all resources. It should be called before application/activity ends.
- ***process(Uri videoUri, int startMs, int endMs, TaggingProcessHandler processHandler)***
  This function processes the video asynchronously and returns the the tags in 1 second time frame through *TaggingProcessHandler* implementation passed to it.
  - *VideoUri:* Uri of the video
  - *startMs:* Time to start processing video in milliseconds
  - *endMs:* Time to stop processing video in milliseconds. If you want to process till the end of the video pass -1.
  - *processHandler: An implementation of* ***TaggingProcessHandler***

TaggingProcessHandler interface:

This interface has two methods :

- ***onProcessComplete(TaggingResult[] results)***
  This method is called when the process has been completed successfully and passes the tagging results as its argument.
- ***onProcessError(String message)***
  This method is called whenever a problem occurs during the processing of the video. The error message will be passed as its argument.

TaggingResult structure:

This class contains two properties:

- ***TimeStamp*** which is accessible by ***getTimeStamp*** getter method and contains the time of the frame from the beginning of the video in micro-seconds. The well-formatted string of this time can be accessed via ***getTimeStr*** method.
- ***Tags*** which is an array of ***TagInfo*** and is accessible by ***getTags*** getter method. Each TagInfo contains a tag name accessible by ***getTag***.