Microsoft Azure Cognitive Services

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4.7.18

Cognitive Services

- Computer Vision

  - Recognize celebrities

- Face API

  - Recognize users

- iOS SDK

  - Enhance your security with Face APIs

  - Process video clip

Computer Vision API

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<u>Computer Vision</u> API

- Analyzes visual content in different ways based on developers' inputs.

- The computer vision is already trained with 1M celebs from our planet (demo).

- <u>Analysis Demo</u>: This <u>Python code</u> gets info about an image with a celeb(s)

Computer Vision

- Get to know

```
def selectedLanguage:

    allOtherLanguages = ["JAVA", "Node.js", "C#"]

    sdkLanguages = ["Windows", "Swift", "Android", "Ruby",
    "Python", "Go", "Node.js"]

    print('whyPython', sdkLanguages, allOtherLanguages)
```

Computer Vision API

(code example)

Computer Vision

- Variables:

  - vision_subscription_key = 'some key'

  - uri_base = 'https://somewhere.api.cognitive.microsoft.com'

- Find celebs (<u>analyze</u>):

  - <u>Visual features</u>: ImageType, Faces, Adult.

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Face API

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Face API

Face API

- Defers from computer vision API. Why?

  - Concentrate on the face details, neglect the rest of the image.

  - Has much more attributes about face detection, computer vision returns less info (only <u>age</u>, gender and coordinates).

- <u>Face attributes</u> - demo #1 (<u>detect face</u>).

<u>Face</u> API

- How to recognize a person:

  - <u>Create a person group</u>

  - <u>Add a person</u> **to** a group

  - <u>Add faces</u> of a person from the group

  - <u>Train</u> all models in group…

  - … <u>Recognize</u> (based on the trained models)

- Demo #2 - verify person

Face API - <u>Verify</u>

- <u>LargePersonList vs. LargeFaceList</u>:

  - LargeFaceList can hold up to 1,000,000 faces, LargePersonList can hold up to 1,000,000 **persons** (each person can have 248 faces).

- <u>Find Similar</u> is used for scenario like finding celebrity-like faces, similar face filtering, or as a light way face identification. But if the actual use is to identify person, please use <u>PersonGroup</u> / <u>LargePersonGroup</u> and <u>Face - Identify</u>.

Batch Processing of Images

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Custom APIs

Dinesh: "The core tech is valid, it's just need to be trained"

Using Face API on an iOS app

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Using Face API with iOS

- <u>Uber are already using it</u>.

- Code and example:

  - Verify :
    verifyPerson.

  - Face API as a guard
    Demo #3

Using Face API with iOS

- <u>Uber are already using it</u>.

- Code and example:

  - Train the service with a person.

  - Identify the person.

  - Try a fraud user.

  - ~~Use a photo of the identified person~~.

Video Indexer API

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Video Indexer API

- Usages:

  - How were all <u>BaracksDubs</u> made? (think about it, the creator had to view all Barack's videos to search for a suitable word for his songs)

- Demo #1: intro interviews questions:

  - What do you think about Kotlin?

  - What do you think about the Mondial?

- Demo #2: Dinesh quote regarding "Not Hotdog"

Video Indexer API

- Demo:

  - An iOS app that uploads video clip and initiates the indexing.

  - Waiting…

  - On finish: search button is on.

  - OnSearchPressed: request with the search term and present the JSON response.

Questions?

- Examples at GitHub