

# Lab 9 Notes

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## [Step 1] Detecting Languages from text

```
In [19]: language_name={
        'en': 'English',
        'es': 'Spanish',
        'fr': 'French',
        'it': 'Italian'
    }
text1 = "The French Revolution was a period of social and political upl
text2 = "El Quijote es la obra más conocida de Miguel de Cervantes Saa
text3 = "Moi je n'étais rien Et voilà qu'aujourd'hui Je suis le gardien
text4 = "L'amor che move il sole e l'altre stelle."
```

```
In [22]: def detect_language(text):
        response = client.detect_dominant_language(Text=text)
        name = language_name[response['Languages'][0]['LanguageCode']]
        confidence = math.floor(response['Languages'][0]['Score']*100)
        print(name, 'detected with', confidence, '% confidence')
```

```
In [23]: detect_language(text1)

English detected with 99 % confidence
```

```
In [24]: detect_language(text2)

Spanish detected with 99 % confidence
```

```
In [25]: detect_language(text3)

French detected with 99 % confidence
```

```
In [26]: detect_language(text4)

Italian detected with 99 % confidence
```

## [Step 2] Sentiment Analysis

```
In [36]: def sentiment_analysis(text, code):
         response = client.batch_detect_sentiment(TextList = [text], LanguageCode = code)
         print(response['ResultList'][0]['SentimentScore'])

In [37]: sentiment_analysis(text2, 'es')
{'Positive': 0.1598433405160904, 'Negative': 0.0008151692454703152, 'Neutral': 0.8380755186080933, 'Mixed': 0.001266040955670178}

In [38]: sentiment_analysis(text3, 'fr')
{'Positive': 0.3935803174972534, 'Negative': 0.5921157598495483, 'Neutral': 0.013823595829308033, 'Mixed': 0.0004802222247235477}

In [39]: sentiment_analysis(text4, 'it')
{'Positive': 0.985332190990448, 'Negative': 0.004254049155861139, 'Neutral': 0.009053979068994522, 'Mixed': 0.0013597647193819284}
```

### [Step 3] Repeat steps from [Step 2] for detecting entities.

```
In [40]: def detect_entities(text, code):
         response = client.batch_detect_entities(TextList = [text], LanguageCode = code)
         print(response['ResultList'][0]['Entities'])

In [41]: detect_entities(text2, 'es')
[{'Score': 0.9886308908462524, 'Type': 'TITLE', 'Text': 'El Quijote', 'BeginOffset': 0, 'EndOffset': 10}, {'Score': 0.9992279410362244, 'Type': 'PERSON', 'Text': 'Miguel de Cervantes Saavedra', 'BeginOffset': 38, 'EndOffset': 66}, {'Score': 0.9098500609397888, 'Type': 'QUANTITY', 'Text': 'primera parte', 'BeginOffset': 81, 'EndOffset': 94}, {'Score': 0.9835476279258728, 'Type': 'TITLE', 'Text': 'El ingenioso hidalgo don Quijote de la Mancha', 'BeginOffset': 112, 'EndOffset': 157}, {'Score': 0.8697961568832397, 'Type': 'DATE', 'Text': '1605', 'BeginOffset': 173, 'EndOffset': 177}, {'Score': 0.6641538143157959, 'Type': 'QUANTITY', 'Text': 'una', 'BeginOffset': 182, 'EndOffset': 185}, {'Score': 0.9596462845802307, 'Type': 'OTHER', 'Text': 'española', 'BeginOffset': 231, 'EndOffset': 239}, {'Score': 0.719598114490509, 'Type': 'QUANTITY', 'Text': 'una de las más traducidas', 'BeginOffset': 269, 'EndOffset': 294}, {'Score': 0.9852679967880249, 'Type': 'DATE', 'Text': '1615', 'BeginOffset': 299, 'EndOffset': 303}, {'Score': 0.94227135181427, 'Type': 'QUANTITY', 'Text': 'segunda parte', 'BeginOffset': 318, 'EndOffset': 331}, {'Score': 0.9497652649879456, 'Type': 'TITLE', 'Text': 'Quijote de Cervantes', 'BeginOffset': 336, 'EndOffset': 356}, {'Score': 0.9899224638938904, 'Type': 'TITLE', 'Text': 'El ingenioso caballero don Quijote de la Mancha', 'BeginOffset': 374, 'EndOffset': 421}]

In [43]: detect_entities(text3, 'fr')
[{'Score': 0.9872375726699829, 'Type': 'DATE', 'Text': 'aujourd'hui', 'BeginOffset': 32, 'EndOffset': 43}, {'Score': 0.6959105134010315, 'Type': 'QUANTITY', 'Text': 'Tout ce qu'il', 'BeginOffset': 127, 'EndOffset': 140}, {'Score': 0.6048811078071594, 'Type': 'QUANTITY', 'Text': 'tout', 'BeginOffset': 200, 'EndOffset': 204}, {'Score': 0.5311335325241089, 'Type': 'QUANTITY', 'Text': 'tout', 'BeginOffset': 223, 'EndOffset': 227}]

In [45]: detect_entities(text4, 'it')
[]
```

Answer: In my words, entities are the real-world objects in a text, such as a person, location, organization, date and so on, which can be denoted with a proper name. The English word like ‘a’ ‘the’ can’t be an entity.

### [Step 4] Repeat steps from [Step 2] for detecting key phrases.

```
[46]: def detect_key_phrases(text, code):
      response = client.batch_detect_key_phrases(TextList = [text], LanguageCode = code)
      print(response['ResultList'][0]['KeyPhrases'])

[47]: detect_key_phrases(text2, 'es')

[[{'Score': 0.9994539022445679, 'Text': 'El Quijote', 'BeginOffset': 0, 'EndOffset': 10}, {'Score': 0.9999617338180542, 'Text': 'la obra', 'BeginOffset': 14, 'EndOffset': 21}, {'Score': 0.9988439679145813, 'Text': 'más conocida', 'BeginOffset': 22, 'EndOffset': 34}, {'Score': 0.9999772906303406, 'Text': 'Miguel de Cervantes Saavedra', 'BeginOffset': 38, 'EndOffset': 66}, {'Score': 0.9999061226844788, 'Text': 'su primera parte', 'BeginOffset': 78, 'EndOffset': 94}, {'Score': 0.9999792575836182, 'Text': 'el título', 'BeginOffset': 99, 'EndOffset': 108}, {'Score': 0.9560838341712952, 'Text': 'El ingenioso hidalgo don Quijote de la Mancha', 'BeginOffset': 112, 'EndOffset': 157}, {'Score': 0.9998094439506531, 'Text': 'comienzos', 'BeginOffset': 160, 'EndOffset': 169}, {'Score': 0.9962199330329895, 'Text': '1605', 'BeginOffset': 173, 'EndOffset': 177}, {'Score': 0.9999752044677734, 'Text': 'las obras', 'BeginOffset': 180, 'EndOffset': 198}, {'Score': 0.9998710751533508, 'Text': 'más destacadas', 'BeginOffset': 199, 'EndOffset': 213}, {'Score': 0.9999703168869019, 'Text': 'la literatura española', 'BeginOffset': 217, 'EndOffset': 239}, {'Score': 0.9999440312385559, 'Text': 'la literatura universal', 'BeginOffset': 242, 'EndOffset': 265}, {'Score': 0.9995015263557434, 'Text': 'las más traducidas', 'BeginOffset': 276, 'EndOffset': 294}, {'Score': 0.9999786019325256, 'Text': 'la segunda parte', 'BeginOffset': 315, 'EndOffset': 331}, {'Score': 0.9990293088912964, 'Text': 'Quijote de Cervantes', 'BeginOffset': 336, 'EndOffset': 356}, {'Score': 0.9999479055404663, 'Text': 'el título', 'BeginOffset': 361, 'EndOffset': 370}, {'Score': 0.9364849328994751, 'Text': 'ingenioso caballero don Quijote de la Mancha', 'BeginOffset': 377, 'EndOffset': 421}]

[48]: detect_key_phrases(text3, 'fr')

[[{'Score': 0.9999090433120728, 'Text': 'Moi', 'BeginOffset': 0, 'EndOffset': 3}, {'Score': 0.9550336599349976, 'Text': 'je', 'BeginOffset': 4, 'EndOffset': 6}, {'Score': 0.9563182592391968, 'Text': 'n\'étais rien', 'BeginOffset': 7, 'EndOffset': 19}, {'Score': 0.9490335583686829, 'Text': 'aujourd'hui', 'BeginOffset': 32, 'EndOffset': 43}, {'Score': 0.941249430179596, 'Text': 'Je suis le gardien Du sommeil de ses nuits', 'BeginOffset': 44, 'EndOffset': 86}, {'Score': 0.9999150037765503, 'Text': 'Je', 'BeginOffset': 87, 'EndOffset': 89}, {'Score': 0.9998370409011841, 'Text': 'l', 'BeginOffset': 90, 'EndOffset': 92}, {'Score': 0.990161657333374, 'Text': 'Vous', 'BeginOffset': 106, 'EndOffset': 110}, {'Score': 0.982813835144043, 'Text': 'Tout ce', 'BeginOffset': 127, 'EndOffset': 134}, {'Score': 0.9646840691566467, 'Text': 'qu', 'BeginOffset': 135, 'EndOffset': 138}, {'Score': 0.9985837936401367, 'Text': 'il', 'BeginOffset': 138, 'EndOffset': 140}, {'Score': 0.9997034668922424, 'Text': 'vous', 'BeginOffset': 141, 'EndOffset': 145}, {'Score': 0.9997631907463074, 'Text': 'Elle', 'BeginOffset': 153, 'EndOffset': 157}, {'Score': 0.9946832656860352, 'Text': 'L'espace de ses bras', 'BeginOffset': 174, 'EndOffset': 194}, {'Score': 0.8932915329933167, 'Text': 'tout', 'BeginOffset': 200, 'EndOffset': 204}, {'Score': 0.9624954462051392, 'Text': 'tout', 'BeginOffset': 223, 'EndOffset': 227}, {'Score': 0.9998551607131958, 'Text': 'Je', 'BeginOffset': 241, 'EndOffset': 243}, {'Score': 0.9999161958694458, 'Text': 'l', 'BeginOffset': 244, 'EndOffset': 246}]

[49]: detect_key_phrases(text4, 'it')

[[{'Score': 0.9999063611030579, 'Text': 'L'amor', 'BeginOffset': 0, 'EndOffset': 6}, {'Score': 0.9997649788856506, 'Text': 'che', 'BeginOffset': 7, 'EndOffset': 10}, {'Score': 0.999977171421051, 'Text': 'il sole', 'BeginOffset': 16, 'EndOffset': 23}, {'Score': 0.99992901808080725, 'Text': 'l'altra stelle', 'BeginOffset': 26, 'EndOffset': 40}]
```

Answer: In my words, key phrases are some key noun phrases in one sentence, such as ‘The French Revolution’, ‘a period’, ‘social and political upheaval’ and 'France'.

## [Step 5] Repeat steps from [Step 2] for detecting syntax.

```
def detect_Syntax(text, code):
    response = client.detect_syntax(Text = text, LanguageCode = code)
    print(response['SyntaxTokens'])

detect_Syntax(text1, 'en')

[{'TokenId': 1, 'Text': 'The', 'BeginOffset': 0, 'EndOffset': 3, 'PartOfSpeech': {'Tag': 'DET', 'Score': 0.7}}, {'TokenId': 2, 'Text': 'French', 'BeginOffset': 4, 'EndOffset': 10, 'PartOfSpeech': {'Tag': 'PROPN', 'Score': 0.999977171421051}}, {'TokenId': 3, 'Text': 'Revolution', 'BeginOffset': 11, 'EndOffset': 21, 'PartOfSpeech': {'Tag': 'PROPN', 'Score': 0.999977171421051}}, {'TokenId': 4, 'Text': 'was', 'BeginOffset': 22, 'EndOffset': 25, 'PartOfSpeech': {'Tag': 'V', 'Score': 0.999977171421051}}, {'TokenId': 5, 'Text': 'a', 'BeginOffset': 26, 'EndOffset': 27, 'PartOfSpeech': {'Tag': 'DET', 'Score': 0.999977171421051}}, {'TokenId': 6, 'Text': 'period', 'BeginOffset': 28, 'EndOffset': 34, 'PartOfSpeech': {'Tag': 'PROPN', 'Score': 0.999977171421051}}, {'TokenId': 7, 'Text': 'of', 'BeginOffset': 35, 'EndOffset': 37, 'PartOfSpeech': {'Tag': 'PREP', 'Score': 0.999977171421051}}, {'TokenId': 8, 'Text': 'social', 'BeginOffset': 38, 'EndOffset': 44, 'PartOfSpeech': {'Tag': 'ADJ', 'Score': 0.999977171421051}}, {'TokenId': 9, 'Text': 'and', 'BeginOffset': 45, 'EndOffset': 48, 'PartOfSpeech': {'Tag': 'CONJ', 'Score': 0.999977171421051}}, {'TokenId': 10, 'Text': 'political', 'BeginOffset': 49, 'EndOffset': 58, 'PartOfSpeech': {'Tag': 'ADJ', 'Score': 0.999977171421051}}, {'TokenId': 11, 'Text': 'upheaval', 'BeginOffset': 59, 'EndOffset': 67, 'PartOfSpeech': {'Tag': 'NOUN', 'Score': 0.999977171421051}}, {'TokenId': 12, 'Text': 'in', 'BeginOffset': 68, 'EndOffset': 71, 'PartOfSpeech': {'Tag': 'PREP', 'Score': 0.999977171421051}}, {'TokenId': 13, 'Text': 'France', 'BeginOffset': 71, 'EndOffset': 78, 'PartOfSpeech': {'Tag': 'PROPN', 'Score': 0.999977171421051}}, {'TokenId': 14, 'Text': 'and', 'BeginOffset': 78, 'EndOffset': 82, 'PartOfSpeech': {'Tag': 'CONJ', 'Score': 0.999977171421051}}, {'TokenId': 15, 'Text': 'its', 'BeginOffset': 82, 'EndOffset': 85, 'PartOfSpeech': {'Tag': 'PROPN', 'Score': 0.999977171421051}}]
```



```
[{"TokenId": 1, "Text": "El", "BeginOffset": 0, "EndOffset": 2, "PartOfSpeech": {"Tag": "DET", "Score": 0.9999085664749146}}, {"TokenId": 2, "Text": "Quijote", "BeginOffset": 3, "EndOffset": 10, "PartOfSpeech": {"Tag": "PROPN", "Score": 0.52565883094596863}}, {"TokenId": 3, "Text": "es", "BeginOffset": 11, "EndOffset": 13, "PartOfSpeech": {"Tag": "VERB", "Score": 0.9999171495437622}}, {"TokenId": 4, "Text": "la", "BeginOffset": 14, "EndOffset": 16, "PartOfSpeech": {"Tag": "DET", "Score": 0.9999368190765381}}, {"TokenId": 5, "Text": "obra", "BeginOffset": 17, "EndOffset": 21, "PartOfSpeech": {"Tag": "NOUN", "Score": 0.9998323766780374}}, {"TokenId": 6, "Text": "m\u00e1s", "BeginOffset": 22, "EndOffset": 25, "PartOfSpeech": {"Tag": "ADV", "Score": 0.9999446868896484}}, {"TokenId": 7, "Text": "conocida", "BeginOffset": 26, "EndOffset": 34, "PartOfSpeech": {"Tag": "ADJ", "Score": 0.8264637589454651}}, {"TokenId": 8, "Text": "de", "BeginOffset": 35, "EndOffset": 37, "PartOfSpeech": {"Tag": "ADP", "Score": 0.9999831069696795}}, {"TokenId": 9, "Text": "Miguel", "BeginOffset": 38, "EndOffset": 44, "PartOfSpeech": {"Tag": "PROPN", "Score": 0.9890976636787501}}, {"TokenId": 10, "Text": "de", "BeginOffset": 45, "EndOffset": 47, "PartOfSpeech": {"Tag": "ADP", "Score": 0.9999999999999999}}
```

```
[{"TokenId": 1, 'Text': 'Moi', 'BeginOffset': 0, 'EndOffset': 3, 'PartOfSpeech': {'Tag': 'PRON', 'Score': 0.9892309388052063}}, {"TokenId": 2, 'Text': 'je', 'BeginOffset': 4, 'EndOffset': 6, 'PartOfSpeech': {'Tag': 'PRON', 'Score': 0.999999642371313}}, {"TokenId": 3, 'Text': "n'", 'BeginOffset': 7, 'EndOffset': 9, 'PartOfSpeech': {'Tag': 'ADV', 'Score': 0.9420575499534623}}, {"TokenId": 4, 'Text': 'étais', 'BeginOffset': 9, 'EndOffset': 14, 'PartOfSpeech': {'Tag': 'AUX', 'Score': 0.953959465026855}}, {"TokenId": 5, 'Text': 'rien', 'BeginOffset': 15, 'EndOffset': 19, 'PartOfSpeech': {'Tag': 'PRON', 'Score': 0.95246392348847961}}, {"TokenId": 6, 'Text': 'Et', 'BeginOffset': 20, 'EndOffset': 22, 'PartOfSpeech': {'Tag': 'CCONJ', 'Score': 0.999827980951782}}, {"TokenId": 7, 'Text': 'voilà', 'BeginOffset': 23, 'EndOffset': 28, 'PartOfSpeech': {'Tag': 'VERB', 'Score': 0.999816596508261}}, {"TokenId": 8, 'Text': 'qu"', 'BeginOffset': 29, 'EndOffset': 32, 'PartOfSpeech': {'Tag': 'SCONJ', 'Score': 0.640893280506134}}, {"TokenId": 9, 'Text': 'aujourd'hui', 'BeginOffset': 32, 'EndOffset': 43, 'PartOfSpeech': {'Tag': 'ADV', 'Score': 0.9999371767044067}}, {"TokenId": 10, 'Text': 'Je', 'BeginOffset': 44, 'EndOffset': 46, 'PartOfSpeech': {'Tag': 'PRON', 'Score': 0.9998699426651001}}, {"TokenId": 11, 'Text': 'suis', 'BeginOffset': 47, 'EndOffset': 51, 'PartOfSpeech': {'Tag': 'AUX', 'Score': 0.999999642371313}}
```

```
[{"TokenId": 1, "Text": "L", "BeginOffset": 0, "EndOffset": 2, "PartOfSpeech": {"Tag": "DET", "Score": 0.9990321397781372}}, {"TokenId": 2, "Text": "amor", "BeginOffset": 2, "EndOffset": 6, "PartOfSpeech": {"Tag": "NOUN", "Score": 0.9907339811325073}}, {"TokenId": 3, "Text": "che", "BeginOffset": 7, "EndOffset": 10, "PartOfSpeech": {"Tag": "PRON", "Score": 0.995006672096252}}, {"TokenId": 4, "Text": "move", "BeginOffset": 11, "EndOffset": 15, "PartOfSpeech": {"Tag": "VERB", "Score": 0.997265696525573}}, {"TokenId": 5, "Text": "il", "BeginOffset": 16, "EndOffset": 18, "PartOfSpeech": {"Tag": "DET", "Score": 0.999862909931701}}, {"TokenId": 6, "Text": "sole", "BeginOffset": 19, "EndOffset": 23, "PartOfSpeech": {"Tag": "NOUN", "Score": 0.996540427287468}}, {"TokenId": 7, "Text": "e", "BeginOffset": 24, "EndOffset": 25, "PartOfSpeech": {"Tag": "CONJ", "Score": 0.9998300075531006}}, {"TokenId": 8, "Text": "l", "BeginOffset": 26, "EndOffset": 28, "PartOfSpeech": {"Tag": "DET", "Score": 0.9999667406082153}}, {"TokenId": 9, "Text": "altre", "BeginOffset": 28, "EndOffset": 33, "PartOfSpeech": {"Tag": "ADJ", "Score": 0.68281964478302}}, {"TokenId": 10, "Text": "stelle", "BeginOffset": 34, "EndOffset": 40, "PartOfSpeech": {"Tag": "NOUN", "Score": 0.9943856009090269}}, {"TokenId": 11, "Text": ".", "BeginOffset": 40, "EndOffset": 41, "PartOfSpeech": {"Tag": "PUNCT", "Score": 0.999809265136719}}]
```

## [Step 6] AWS Rekognition

22994257-lab9

Info

Objects

Properties

Permissions

Metrics

Management

Access Points

### Objects (4)

Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 inventory](#) to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. [Learn more](#)

↻

Copy S3 URI

Copy URL

Download

Open

Delete

Actions ▼

Create folder

Upload

< 1 > ⚙

<input type="checkbox"/>	Name	Type	Last modified	Size	Storage class
<input type="checkbox"/>	a person on the beach.jpg	jpg	October 12, 2022, 15:58:07 (UTC+08:00)	85.2 KB	Standard
<input type="checkbox"/>	image with text.jpg	jpg	October 12, 2022, 15:58:08 (UTC+08:00)	26.9 KB	Standard
<input type="checkbox"/>	people showing their faces.jpg	jpg	October 12, 2022, 15:58:08 (UTC+08:00)	49.5 KB	Standard
<input type="checkbox"/>	Urban setting.jpg	jpg	October 12, 2022, 15:58:09 (UTC+08:00)	258.3 KB	Standard

## 1. Label Recognition

```
def detect_labels(photo, bucket):
    client=boto3.client('rekognition')
    response = client.detect_labels(Image={'S3Object':{'Bucket':bucket,'Name':photo}}, MaxLabels=10)
    print('Detected', len(response['Labels']), 'labels for ',photo)
    print()
    for label in response['Labels']:
        print ("Label: " + label['Name'])
        print ("Confidence: " + str(label['Confidence']))
        print ("-----")
```

```
detect_labels('Urban setting.jpg','22994257-lab9')
```

Detected 10 labels for Urban setting.jpg

Label: Grass  
Confidence: 99.95657348632812

-----

Label: Plant  
Confidence: 99.95657348632812

-----

Label: City  
Confidence: 98.78321838378906

-----

Label: Urban  
Confidence: 98.78321838378906

-----

Label: Building  
Confidence: 98.78321838378906

-----

Label: High Rise  
Confidence: 97.90977478027344

-----

Label: Lawn  
Confidence: 94.08061218261719

-----

Label: Downtown  
Confidence: 93.8046875

-----

Label: Park  
Confidence: 88.2553482055664

-----

Label: Metropolis  
Confidence: 81.7234115600586

-----

## 2. Image Moderation

```
def moderate_image(photo, bucket):
    client=boto3.client('rekognition')
    response = client.detect_moderation_labels(Image={'S3Object':{'Bucket':bucket, 'Name':photo}})
    for label in response['ModerationLabels']:
        print (label['Name'] + ' : ' + str(label['Confidence']))
        print (label['ParentName'])
```

```
moderate_image('a person on the beach.jpg', '22994257-lab9')
```

```
Suggestive : 86.2708969116211
```

```
Barechested Male : 86.2708969116211
```

```
Suggestive
```

### 3. Facial Analysis

```
def detect_faces(photo, bucket):
    client=boto3.client('rekognition')
    response = client.detect_faces(Image={'S3Object':{'Bucket':bucket, 'Name':photo}}, Attributes=['ALL'])
    for faceDetail in response['FaceDetails']:
        print('The detected face is between ' + str(faceDetail['AgeRange']['Low'])
              + ' and ' + str(faceDetail['AgeRange']['High']) + ' years old')
        print('Here are the other attributes:')
        # print(json.dumps(faceDetail, indent=4, sort_keys=True))
        # Access predictions for individual face details and print them
        print("Gender: " + str(faceDetail['Gender']))
        print("Smile: " + str(faceDetail['Smile']))
        print("Eyeglasses: " + str(faceDetail['Eyeglasses']))
        print("Emotions: " + str(faceDetail['Emotions'][0]))
        print ("-----")
```

```
detect_faces('people showing their faces.jpg', '22994257-lab9')
```

```
The detected face is between 36 and 44 years old
```

```
Here are the other attributes:
```

```
Gender: {'Value': 'Male', 'Confidence': 98.40275573730469}
```

```
Smile: {'Value': True, 'Confidence': 95.01976013183594}
```

```
Eyeglasses: {'Value': False, 'Confidence': 95.87667846679688}
```

```
Emotions: {'Type': 'HAPPY', 'Confidence': 96.12042236328125}
```

```
-----
```

```
The detected face is between 25 and 35 years old
```

```
Here are the other attributes:
```

```
Gender: {'Value': 'Female', 'Confidence': 99.99845123291016}
```

```
Smile: {'Value': True, 'Confidence': 96.15525817871094}
```

```
Eyeglasses: {'Value': False, 'Confidence': 97.4869613647461}
```

```
Emotions: {'Type': 'HAPPY', 'Confidence': 98.3642349243164}
```

```
-----
```

### 4. Detect Text from an image

```
def detect_text(photo, bucket):
    client=boto3.client('rekognition')
    response=client.detect_text(Image={'S3Object':{'Bucket':bucket, 'Name':photo}})
    textDetections=response['TextDetections']
    print ('Detected text\n-----')
    for text in textDetections:
        print ('Detected text:' + text['DetectedText'])
        print ('Confidence: ' + "{:.2f}".format(text['Confidence']) + "%")
        print ('Id: {}'.format(text['Id']))
        if 'ParentId' in text:
            print ('Parent Id: {}'.format(text['ParentId']))
        print ('Type:' + text['Type'])
        print ("-----")
```



```
detect_text('image with text.jpg', '22994257-lab9')
```

Detected text

-----

Detected text:COME SAIL AWAY

Confidence: 99.83%

Id: 0

Type:LINE

-----

Detected text:COME

Confidence: 99.78%

Id: 1

Parent Id: 0

Type:WORD

-----

Detected text:SAIL

Confidence: 100.00%

Id: 2

Parent Id: 0

Type:WORD

-----

Detected text:AWAY

Confidence: 99.69%

Id: 3

Parent Id: 0

Type:WORD

-----