

Evaluating the Accuracy of Amazon Textract - Handwritten vs Typed

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Introduction

- **Why Amazon Textract?**
 - interdisciplinary study
 - build on to our previous knowledge
- **What is Amazon Textract?**
 - a ML service that automatically extracts text, handwriting, and data from scanned documents



Research Focus

- **Research Question**
 - How accurate is Amazon Textract's ability to detect and extract text blocks for handwritten text vs typed text
- **Hypothesis**
 - Amazon Textract will have a higher accuracy in analyzing typed text than handwritten text.

Data Collection

In order to see how accurately “Textract” pull out the words, we are going to use printed words and hand written words to compare and contrast the result. Four types of words are used:

1. Modern Language
2. Shakespeare so called “old English”
3. Math characters
4. Random characters that are not a language

Research Methods

- **Experiment Process**
 - Upload pictures to S3 bucket and use Amazon Textract to extract texts
 - Format the result to show type, the detected text, and confidence percentage, and the upload images
 - Calculate and compare the percentage of accuracy

AWS Service Tutorial

Step 1:

We Need to Import the Corresponding Packages

Because we want to use Python SDK, or integrating Python application, library or script with AWS services (like S3 and Textract), we need to import **boto3**.

Also, since Textract mainly deals with Image, or trying to help us extract information from image, we need the **Image** and **ImageDraw** module from Pillow to help us to import our data using pictures, retouch existing images, and generate new image after it is processed by the service.

Last but not lease, we need to use **io** to help us read information from whatever file we choose to use.

```
import boto3
import io
from PIL import Image, ImageDraw
```

AWS Service Tutorial

Step 2:

Import the file we want to process to the S3 bucket.

First of all, we need to know what buckets do we have using the `ls`:

```
!aws s3 ls  
2022-11-07 00:36:44 finalproject-group5  
2022-10-31 02:46:00 hw3-question5-group4  
2022-10-24 14:43:55 image-api-example-chen  
2022-10-17 14:51:00 oct17bucketforqtm350
```

In there, we could see that our group have created a S3 bucket specifically for this final project. So, this is the bucket where we want to use to import the file that is ready to be processed. In general, you could just choose a bucket to use for the purpos of using the service.

Then, we could upload the image we want to process using the AWS service into this notebook. After upload, we could check if we have successfully done so using `ls`

```
!ls  
AWS-Extract-Tutorial.ipynb  lost+found
```

After we upload and before we move our image to the busket we are going to use, it shoudl show the image file with this ipynb notebook.

Next, we could move the image to the S3 bucket using the following code:

```
!aws s3 mv IMAGE_NAME s3://BUCKET_NAME
```

Where the capitalized part within this code needs to be changed into your corresponding information. Take our groups' image and bucket as an example:

AWS Service Tutorial

Continued – Step 2

```
! aws s3 mv Emory-website.png s3://finalproject-group5  
move: ./Emory-website.png to s3://finalproject-group5/Emory-website.png
```

We could double check if the file is in the bucket we want to import our file to process using `ls`:

```
!aws s3 ls finalproject-group5  
2022-11-07 01:07:34      147395 Emory-website.png
```

As shown above, the file is already there. So now we are ready to use our service to process the image.

AWS Service Tutorial

Step 3:

Start using AWS Service to Extract Information from Image

Firstly, we need to use the `boto3` to connect with our `s3` bucket. Then, we need to find the specific object from the bucket and make the connection so we get the resource ready for the service to run through.

When making the connection we could just use the following code:

```
s3_connection.Object("BUCKET NAME","IMAGE NAME")
```

Again, where the capitalized part within this code needs to be changed into your corresponding information.

```
s3_connection = boto3.resource('s3')  
s3_object = s3_connection.Object("finalproject-group5","Emory-website.png")  
s3_response = s3_object.get()
```

Next, we need to read the resource we get from the `s3` bucket.

```
stream = io.BytesIO(s3_response['Body'].read())  
image=Image.open(stream)
```

Now, it's time for us to call the service our and prepare for the service to run through our file.

In general, to call service using Python SDK, we could use:

```
boto3.client('SERVICE NAME')
```

(where the capitalized part within this code needs to be changed into your corresponding information)

AWS Service Tutorial

```
: client = boto3.client('textract')
```

To use this service, we could use the following code to tell the computer all the information it needs to find the file it will run service through:

```
response = client.detect_document_text(Document={'S3Object': {'Bucket': "BUCKET NAME", 'Name': "IMAGE NAME"}})
```

(S3Object -- is the resource where you make connection from previous codes.)

```
: response = client.detect_document_text(  
    Document={'S3Object': {'Bucket': "finalproject-group5", 'Name': "Emory-website.png"}})
```

Then, we want to show our response as blocks so it is easy to see what is detected and what is not. Also, we want to create the printed notification to notify if the service is successfully run through.

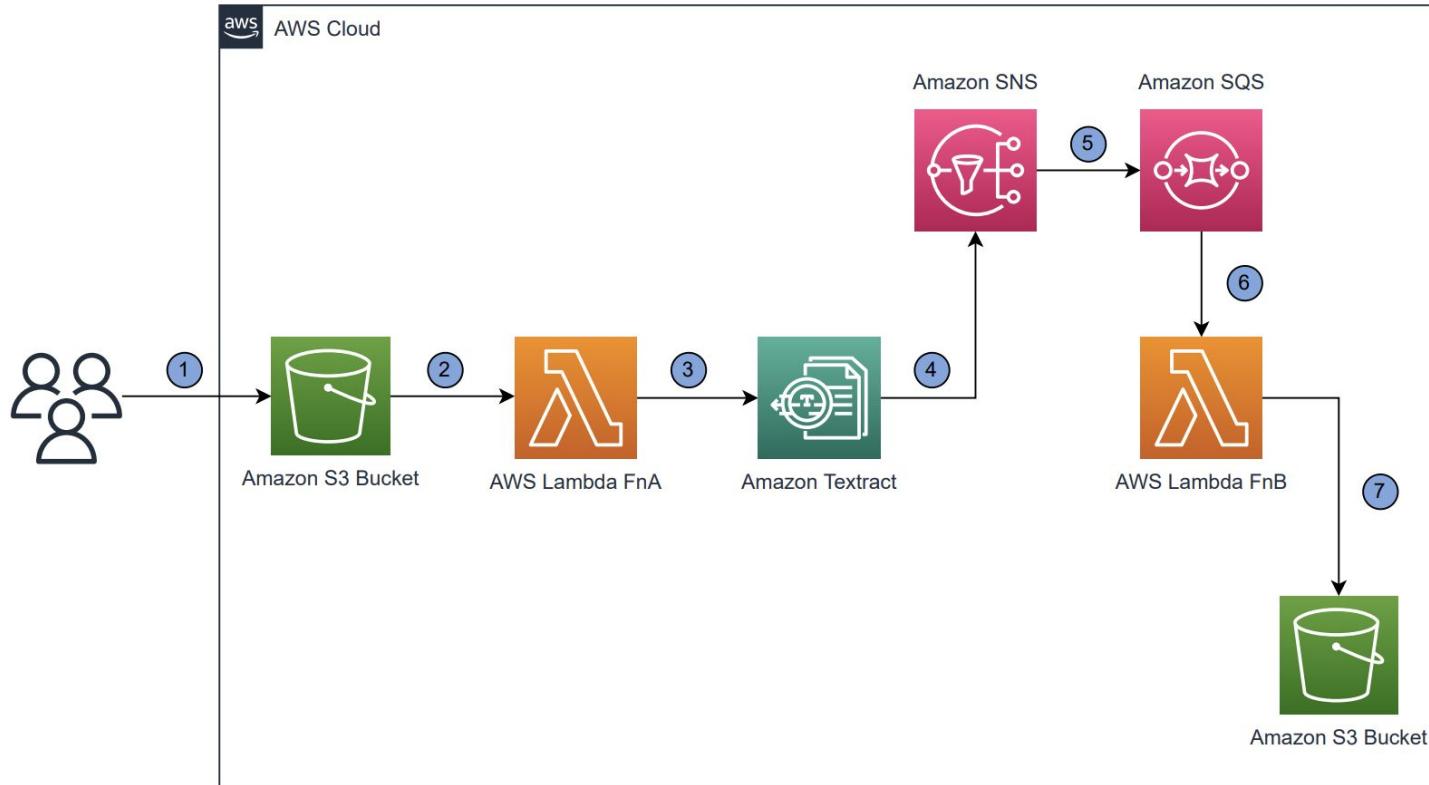
```
: blocks=response['Blocks']  
width, height =image.size  
print ('Detected Document Text')
```

Detected Document Text

Lastly, we could just show what it is detected from calling our named object *blocks*

```
: blocks
```

Architecture



1. Modern Language

Hello, my name is Eric and I am currently a junior at Emory University, majoring in applied math and statistics. Since I was a kid, I watch my parents long and short stocks on their phone. Every now and then, they might take me out for a decent dinner when their stocks are doing well in the market. In my young ages, I see finance as a video game that grown-up plays where it fills with excitement and a certain amount of fascinating risks.

Hello, my name is Enz and I am currently a junior at Emory University, majoring in applied math and statistics. Since I was a kid, I watch my parents long and short stocks on their phone. Every now and then, they might take me out for a decent dinner when their stocks are doing well in the market. In my young ages, I see finance as a video game that grown-up plays where it fills with excitement and a certain amount of fascinating n3ks.

Every words are the same, but we also add some mistakes in the writing like "on" and "video." We want to see if "Textract" can detect it but still run out the word we want.

Result

Hello, my name is Enz and I am currently a junior at Emory University, majoring in applied math and statistics. Since I was a kid, I watch my parents long and short stocks on their phone. Every now and then, they might take me out for a decent dinner when their stocks are doing well in the market. In my young ages, I see finance as a video game that grown up plays when it fills with excitement and a certain amount of fascinating risks.

Type: LINE

Detected: Hello, my name **13 Enz** and I am currently **or** junior at Emary University,

Confidence: 85.28%

Id: caec7025-a0b2-4622-b570-1bcc01adfe76

Relationships: [{}'Type': 'CHILD', 'Ids': ['3d06cee1-f9a2-4ac5-80bf-c4d035aa32c7', 'f1b809c7-1b05-41a6-ab34-900c45741456', 'b329c0e5-7407-4654-8021-ced44e0a60c1', 'c4738e29-21d0-4fdf-a096-422c4a13b3d9', 'f6f9a85f-ba3d-4a0f-a85c-df0e788e2411', '063e266d-78f4-4867-b242-a48ec5b41610', 'e3f2ec76-2bfa-4d9f-bf96-5cd4035aa424', '1ca798f5-4b3d-4443-a708-f7c35200d623', '0dab9803-bb1a-4a62-a323-68e9b42b3f52', 'b99f2909-e609-490b-9704-6e339d2fe7aa', '0dce0d99-dc09-4001-81e8-a36ba0848c75', '86d30cea-d502-4711-9397-10496cb40b2d', '41c3fa1c-4bbd-41fb-8d6d-e4e18d6ee0f2', '8ed69035-4c70-4ef6-973f-cd9c4e0ef005']]}

Bounding Box: {'Width': 0.9190268516540527, 'Height': 0.04389118775725365, 'Left': 0.038313910365104675, 'Top': 0.016864141449332237}

Polygon: [{}'X': 0.038313910365104675, 'Y': 0.016864141449332237}, {'X': 0.9573090672492981, 'Y': 0.017643729224801064}, {'X': 0.9573407769203186, 'Y': 0.060755327343940735}, {'X': 0.03833092749118805, 'Y': 0.05996544286608696}]

Type: LINE

Detected: majoring in applied math and statistics. Since I was a kid **Z** watch

Confidence: 92.79%

Id: 306b61ce-cddb-48b3-8b1a-28416d90fed4

Relationships: [{}'Type': 'CHILD', 'Ids': ['ad6add4b-f618-40d5-8112-6904f07737bd', '64eb730e-f945-4988-ba9d-c4707b971584', '9adb050d-c188-4652-a8e4-6436c8ba171b', '8066dd4e-b5a0-4f8c-bd4f-1c70d3a49c56', 'c37c767c-310f-4f50-8b0a-90374e25be25', 'c1c28261-1c7c-49bd-bc6e-609a38be0308', 'e4587560-e3b1-4312-a5d2-9c6910c41663', 'baa17b6a-1af8-40d3-880a-0eecdc7aa4be', '2729083a-e528-434a-9591-68b5c303acde', 'f5a3d651-9f2f-4b2e-bf6f-8ebf35229d4b', '61be8d05-be92-4225-a264-3d127e4483c1', '6d8c11ab-9df7-40ff-8ba4-2a8244bd6a0e', '96d152bf-366d-4986-8869-90ff8a3bcfd6']]}

Bounding Box: {'Width': 0.9220037460327148, 'Height': 0.0453576035797596, 'Left': 0.022087462246418, 'Top': 0.048277903348207474}

Polygon: [{}'X': 0.022087462246418, 'Y': 0.048277903348207474}, {'X': 0.9440586566925049, 'Y': 0.04906754195690155}, {'X': 0.9440912008285522, 'Y': 0.09363550692796707}, {'X': 0.022104786708950996, 'Y': 0.0928351879119873}]

Type: LINE

Detected: my parents long and short stocks **on** their phone. Every now and Then

Confidence: 89.41%

Id: ffadd10e-5f7f-4757-b7cc-898ba330b8b9

Relationships: [{}'Type': 'CHILD', 'Ids': ['46401bd3-963a-4bef-848c-74c8790e5840', 'd8811d57-803c-4cea-99b8-4d8452542f9f', '3c9b7ee5-b1dd-4bf1-aacd-1339d5823d42', '420d7fed-2f79-4062-8632-cc810aa555d4', 'ca5e4ee8-6a44-4f60-988d-0ca958634cb1', '6d4e9774-2ac0-4a0a-9733-dde4cb7141f3', 'dfec7dca-d2b9-43bf-bd19-eaf7cf6256ad', 'aaa5e14a-3bfe-4721-b1ff-f7d2bbf2f224', '7f76ed3a-8906-4bfd-bf32-19c314ac5751', '141d79b4-e3b8-4832-bdbf-c73f61176cc6', '3cb1d599-fead-4bb0-93e4-6448cefa0905', 'db509f28-5fef-4f06-9442-f7db69bbd0dc', '0f0e84b0-6a6b-4d2a-81bb-60e2a3d89c62']]}

Bounding Box: {'Width': 0.9581947326660156, 'Height': 0.049875982105731964, 'Left': 0.02596205845475197, 'Top': 0.0844142884016037}

Polygon: [{}'X': 0.02596205845475197, 'Y': 0.0844142884016037}, {'X': 0.9841203093528748, 'Y': 0.08524391055107117}, {'X': 0.9841568470001221, 'Y': 0.13429026305675507}, {'X': 0.025981193408370018, 'Y': 0.13344843685626984}]

Type: LINE

Detected: they might take me out for a decent dinner when ther stocks are dang

Confidence: 92.91%

Id: 156a1bbf-b867-4d6a-84d4-d79f352b02ae

Relationships: [{"Type": "CHILD", "Ids": ["f5209150-b6c8-4506-8a55-d1baa78dd08b", "cf7b0f9f-58bf-491d-8d8c-d3f39b961177", "0415d3c7-e864-4912-8bb2-7556d46a0d47", "96602aac-6a20-4283-8650-f7723516aaee", "4962a8ff-6957-4096-9adf-9ce2e4efe5ee", "8af78b94-5b43-495d-b788-9cb315b4e319", "1dfa87c7-ae5f-4c2c-8ce9-bc1dd6ac225a", "1b93bf33-8154-4e59-b3ec-656e0f9eca97", "914b0df7-a227-4e9c-9228-e4f7eea2fb61", "38c3e996-4a8b-4e45-b3b9-9693998c3ec2", "cc9fc658-b6e4-4593-b972-5753fe4736ce", "c59f30e9-f8b9-4028-9545-9204b97cf735", "9cb5556b-ea93-47f3-97b8-537d80ebbbe6", "4747e7fc-7728-4391-81fd-3d7afee51da6'"]}]

Bounding Box: {"Width": 0.9422711133956909, "Height": 0.05440415441989899, "Left": 0.03484398499131203, "Top": 0.11698261648416519}

Polygon: [{"X": 0.03484398499131203, "Y": 0.11698261648416519}, {"X": 0.9770753383636475, "Y": 0.11780641227960587}, {"X": 0.9771150946617126, "Y": 0.17138677835464478}, {"X": 0.034865062683820724, "Y": 0.17054985463619232}]]

Type: LINE

Detected: well in the market. In my young ages, Z see finance as a video game

Confidence: 94.06%

Id: c5bc91a7-e564-4097-b20f-64e29b6460a6

Relationships: [{"Type": "CHILD", "Ids": ["2e8e1b6c-e410-419e-9873-141feef0094c", "2028da79-2caa-41e2-94a3-451680bc0faf", "aa3eeae9-9f82-43b9-8889-96a5cbe8ad13", "ad560d42-88c7-4808-a378-15ad0c9d3736", "2d2388a3-d0d1-4038-9774-751e9eab2b9c", "233e7d22-e9fe-491b-9b13-1943d031e663", "899c5754-942f-4746-ae62-988ddab6227b", "09e15b2d-2044-4a8a-909a-c83b043fe75f", "e3bada05-0b8d-4ce3-ac2b-b941dd000f79", "377ff333-a708-40a8-a19d-eb70ecec1a19", "16c1d169-3ee7-4010-9bb5-50fa5a06392d", "d57ec034-7049-4c4d-a6e2-4b64ab5eeb33", "43bc8ef1-17b1-42bb-a2fb-629e21d2b46f", "01d7b49d-a5b6-4bcd-a6c0-290a3e73d29c", "f570db8f-5851-4fbf-8d2b-6ad50f38a8b3'"]}]

Bounding Box: {"Width": 0.94669944040792786, "Height": 0.05315820872783661, "Left": 0.02532884106040001, "Top": 0.1524284929037094}

Polygon: [{"X": 0.02532884106040001, "Y": 0.1524284929037094}, {"X": 0.9719895124435425, "Y": 0.1532648801803589}, {"X": 0.9720282554626465, "Y": 0.20558671653270721}, {"X": 0.025349242612719536, "Y": 0.20473745465278625}]]

Type: LINE

Detected: that grown up plays when it fills with excitement and a certain amount

Confidence: 99.14%

Id: d7a776cb-9bfe-4acf-847b-8ff975dc9f91

Relationships: [{"Type": "CHILD", "Ids": ["c76351ea-f327-4d44-a6e3-09b6976772d4", "f40faa88-dc04-4531-8ca7-e46de283f489", "3ff96314-a3e9-4eaf-bd3d-cdd34f68d252", "93c3ade6-9042-432a-ba47-d77a77e1bc47", "0d5522a6-d97e-4247-9ed8-f7b045828dd9", "f7aecb8b-19db-4398-8f6c-f21d7ddf6df0", "bdd5b8ba-62df-44d7-970f-5417a046b6f9", "3158cf7d-39b5-4669-bd49-3dce8f7f7dd2", "e2837522-1baa-42e1-99a8-6cf4429d28a6", "be2e0ad0-189c-4432-9b04-e6cf8bb36fdb", "72f38bfd-44cb-4c15-9950-2a8b72a878d7", "c6777b7e-0c24-43ae-8759-9ced25c82ea3", "1c464460-707b-4266-a507-1f81ea2bdcee'"]}]

Bounding Box: {"Width": 0.9149464964866638, "Height": 0.03944935277104378, "Left": 0.030332447960972786, "Top": 0.20262232422828674}

Polygon: [{"X": 0.030332447960972786, "Y": 0.20262232422828674}, {"X": 0.9452506899833679, "Y": 0.20344258844852448}, {"X": 0.9452789425849915, "Y": 0.24207167327404022}, {"X": 0.030347580090165138, "Y": 0.2412422150373459}]]

Correct percentage: 79/84 = 94%

Type: LINE

Detected: Hello, my name is Eric and I am currently a junior at Emory University, majoring in applied math and

Confidence: 99.79%

Id: b881ba32-1cee-48ee-b9f3-a0b5467c2f14

Relationships: [{"Type": "CHILD", "Ids": ["29ff48f7-5cc2-4734-adc9-f2bc134dc2b8", "109fe7c8-cfa6-4631-81bc-739c1ed78704", "da44e58b-ff22-405b-ab6-eea5ae2aabb7", "24623b97-2f65-4b85-aac9-01e6de5a39a1", "c322ba67-55ae-4860-876f-9b80a6058411", "6d20df93-e522-43a0-8839-289834165193", "a59c2fa6-1d51-4e9e-ab14-dda39737371d", "da051519-878e-4cd9-97a7-dd02dd365c20", "8f96102f-cced-48fd-a5fd-b85b9b7f75e7", "e2936990-4c2c-40e0-9af1-f337e913abd1", "7633d9c7-c050-4df9-a9ba-371c3d878690", "749fa80a-bcda-4c72-84b5-2a463450fdc9", "570812f0-c126-404b-8608-559da207898c", "89155a3f-7fbc-4671-819e-b6f85bbf1ee0", "47f50307-b3ea-4ef6-8946-d6ed934ce313", "67319413-40c0-40b9-95c6-fdb9bdf8ea3d", "b61bd59c-e892-499a-80fe-9949e9923fc3", "521d5f4b-ee18-4681-9b29-378629c19035", "bbe38a8f-4cfa-4922-9f35-a583bdb845c9"]}]

Bounding Box: {"Width": 0.9806373715400696, "Height": 0.04667244106531143, "Left": 0.004024614114314318, "Top": 0.005998114123940468}

Polygon: [{"X": 0.004024614114314318, "Y": 0.006415039300918579}, {"X": 0.9845038056373596, "Y": 0.005998114123940468}, {"X": 0.9846619963645935, "Y": 0.052261654287576675}, {"X": 0.004255583509802818, "Y": 0.05267055705189705}]]

Type: LINE

Detected: statistics. Since I was a kid, I watch my parents long and short stocks on their phone. Every now and

Confidence: 99.56%

Id: 792362b9-bb33-4a82-aa0f-55a8d7c58994

Relationships: [{"Type": "CHILD", "Ids": ["f29055ae-1bce-4ef7-a5a9-fdc985c18f86", "dda7382e-a4a3-4177-8618-385b7fad6473", "b24b604b-c1b2-4b79-a60d-9bf910b836be", "337f0a4a-6bf6-4148-a86d-296cc8ab3eff", "373389f3-65f2-4468-b73a-1c185e7fdb7", "82c71119-ab11-4b98-bf5b-bb1cd91f87d", "1cea66d5-3c6d-420b-8c7f-3fa43fcfd5923", "c30d569c-3175-4ab0-a17f-b0a1fa5e8892", "5982fc42-1ad1-4736-bc06-c29edb1cbd39", "9d67bf77-7cb7-416b-9d66-0adfe9a0e23c", "d8bcaaf8-8f2e-432d-8c8a-f0c15a7ad353", "d63815b9-3a1f-40c7-8fef-035c20055dd5", "62235523-0b21-4328-94ff-c97cdcb4ac6", "4c5d2539-c57b-472e-b986-902f4ae539d1", "3728035e-5ab1-4935-80b0-ac81cc404bb1", "bcee106a-8f3c-4789-b9a2-7cded097cf7c", "1b75a1e0-10ec-4922-8a61-8869af3368be", "caf9c4f7-2df8-40a8-b7cf-b4b8c6f181f5", "919e102f-3f65-42dc-8c7e-3f66b2105f9a", "754944e8-2622-40b6-a408-cbc31ef795"]}]

Bounding Box: {"Width": 0.9899150729179382, "Height": 0.04548599198460579, "Left": 0.004702628590166569, "Top": 0.05673276633024216}

Polygon: [{"X": 0.004702628590166569, "Y": 0.05714479088783264}, {"X": 0.9944642782211304, "Y": 0.05673276633024216}, {"X": 0.9946177005767822, "Y": 0.1018146276473999}, {"X": 0.004927666857838631, "Y": 0.10221876204013824}]]

Type: LINE

Detected: then, they might take me out for a decent dinner when their stocks are doing well in the market. In

Confidence: 99.88%

Id: ad9287fc-7ac2-4cf1-baa6-c9d389a7a2a6

Relationships: [{"Type": "CHILD", "Ids": ["bce0291c-6557-4f81-a247-cf2ab2076f91", "57ed74c0-138b-4f7d-87d8-a3f4e35f5419", "486e8615-c407-4a31-a0fc-9d55e38c7d1c", "fe73e16d-586d-4a0b-af02-e3b955a32825", "d4b1f33d-ebcb-43da-bb0f-1c1887800be8", "45d27f80-c1b8-4efb-a9c7-787213640e3c", "64ca6a0b-0cbe-4227-869b-fc28c7212590", "a8360be8-0a3f-490b-bb0d-d7a104f7f539", "1a2c480b-3b78-4184-abfa-181facd6469e", "dd1a7cea-17f9-4cb3-9be2-9949d07bad7a", "308aa39f-9d87-431e-9739-70b498c2446e", "f3fe9985-f7e2-4a0f-a445-fada2e351d9b", "63998a38-c6a6-429a-9ec0-849ff8e57ca3", "5afe5a24-68a1-42a4-8c2f-d1f2f5f224d3", "31181de4-75ec-4e1e-9fe4-c91578b72311", "670af317-158a-472c-b1c6-168be8b7108d", "7f19f4b4-6833-4d53-9e6f-0a1a53dba617", "c2aba83e-579d-4c1e-844e-435269328487", "2d5bdc49-c67b-4c4e-8172-dfde2a7d2322", "89e083f9-5587-47f6-a91d-22fc61bf63a7"}]

Bounding Box: {"Width": 0.9703025817871094, "Height": 0.04513021558523178, "Left": 0.004661615006625652, "Top": 0.10710354894399643}

Polygon: [{"X": 0.004661615006625652, "Y": 0.10749880224466324}, {"X": 0.9748104810714722, "Y": 0.10710354894399643}, {"X": 0.9749642014503479, "Y": 0.15184620022773743}, {"X": 0.004884982015937567, "Y": 0.1522337645292282}]]

This is what
is run out for
the printed
words. (The
confidence
levels are
extremely
high as
expected.

2. Old English

If it were done when 'tis done, then 'twere well
It were done quickly. If the assassination
Could trammel up the consequence, and catch,
With his surcease, success, that but this blow
Might be the be-all and the end-all here —
But here, upon this bank and shoal of time,
We'd jump the life to come.

If it were done when 'tis done , then 'twere well It wee done quirkly .
If the assassination could trammel up the consequence , and catch, with
his surcease, success, that but this blow might be the be-all and end-all
here - But ~~is~~ here , upon this bank and shoal of time , We'd
jump the life to come .

Result

If it were done when 'tis done, then 'twere well It were done quickly.
If the assassination could trammel up the consequence, and catch, with
his surcease, success, that but this blow might be the be-all and end-all
here - But ~~the~~ here, upon this bank and shoal of time, we'd
jump the life to come.

Type: LINE

Detected: It it were done when 'tis done , then **there** well **Zt** were done qurkly

Confidence: 84.03%

Id: c44c6d55-4476-4eb0-8ac1-8292d78d3172

Relationships: [{'Type': 'CHILD', 'Ids': ['7bfb0023-08aa-4fb0-aec3-9f1ad33396d2', '730f27e8-46c0-4c3a-89dd-82a896c4a88b', '35106db4-db2c-410b-bf46-4fb09b971b7c', 'a98362a9-1c1c-4f3d-97e3-7eaa1a8e54aa', '22196d75-d49a-41ae-bf0c-87861f840e14', 'f970c187-1340-4d6f-8a53-d2dc0da62790', '983818c5-b08e-406d-9553-ab060746cf40', '57e80776-a8cd-4db2-a54f-b06ff8234159', '52a5db26-2aac-4fe5-b347-d137fd358ee9', '8b33561a-ab65-486e-a175-ea6d01f79b70', '18f1a3d0-db7d-4a48-be8b-9988dfe317d8', '7b2ca9fd-16f7-4384-be1a-068a7dad5550', '7fbdec19-5c4c-40a5-b0f5-db68d96e9d39', '6bdddeb1-7b59-4d42-bc54-7cf3ed507c8b']}]

Bounding Box: { 'Width': 0.9120619893074036, 'Height': 0.03328438475728035, 'Left': 0.026483921334147453, 'Top': 0.33071810007095337 }

Polygon: [{'X': 0.026483921334147453, 'Y': 0.33071810007095337}, {'X': 0.9385223388671875, 'Y': 0.33156609535217285}, {'X': 0.9385459423065186, 'Y': 0.3640024662017822}, {'X': 0.026496581733226776, 'Y': 0.36314675211906433}]

Type: LINE

Detected: If the assassination Could trammel up the consequence, and catch, with

Confidence: 84.54%

Id: 82b859b1-4190-4195-87da-806e0273d5e1

Relationships: [{'Type': 'CHILD', 'Ids': ['b50f25b7-e604-4e97-9d1f-8b7dd5768c96', '322c1f98-bd75-4195-9c97-732a3f162858', '00dcf34b-798d-4ca2-b03c-8c99256bcc92', 'e834414b-6eee-4f2d-84cc-2342fdfab7fc', '2997b3c7-ff57-41ef-85d8-359192a6ede9', 'be2bdf33-df89-4079-b79c-f0d4cd5ce1cc', 'ead33a2a-983c-44d1-98f4-41005b80d24f', '4366666b-a6c1-4387-90c1-9bbbacd07327', 'fec3b833-19bb-41de-99d4-226316ae423e', 'ddabb6e7-b674-4310-ba76-22f5a6d8dbbd', 'ff57aa49-72f0-4e36-aa0c-08e704690806']}]

Bounding Box: { 'Width': 0.8707529306411743, 'Height': 0.03335758298635483, 'Left': 0.026506757363677025, 'Top': 0.3653738796710968 }

Polygon: [{'X': 0.026506757363677025, 'Y': 0.3653738796710968}, {'X': 0.8972365260124207, 'Y': 0.3661913275718689}, {'X': 0.8972597122192383, 'Y': 0.39873144030570984}, {'X': 0.02651945874094963, 'Y': 0.397906631231308}]

Correct percentage: 53/55 = 96.36%

Type: LINE

Detected: his surcease, success, that but this blow Might be the be-all and end-all

Confidence: 93.52%

Id: a44607d3-0047-4c2c-96c1-ce62de69ae15

Relationships: [{}{'Type': 'CHILD', 'Ids': ['1787ddaa2-39dd-4ceb-89a1-5664492a3163', '86b93981-7dd1-455e-b640-403f20b9e567', '8342394d-aa0d-4664-ae85-6988e2fc15ae', '7cf6ff5-43c3-4792-982e-97aa24760548', '31720774-98b7-42f3-99a3-1cd1f311a631', 'db18b773-525b-4aac-b43c-48ab1eee3da', 'dcbb7e60-aedb-4170-84bc-0738a5f52b67', '4d46c5ac-c566-43b5-b76f-ca46e8e9b571', 'add0da29-bd0b-4e80-8be2-9532b5cf391f', '9071cf55-555d-497e-ab83-32e17c672ad2', '8b27dff4-4128-4ab5-81a1-2a1882e015a1', '72486a41-2ada-41cc-9a2b-d2db56c6023a', 'a6eaec13-5235-49aa-a41e-e90f2fff1da9']}]]

Bounding Box: {'Width': 0.9302476644515991, 'Height': 0.028773430734872818, 'Left': 0.02629002369940281, 'Top': 0.4029099643230438}

Polygon: [{}{'X': 0.02629002369940281, 'Y': 0.4029099643230438}, {'X': 0.956517219543457, 'Y': 0.4037923514842987}, {'X': 0.9565377235412598, 'Y': 0.43168342113494873}, {'X': 0.026300907135009766, 'Y': 0.43079429864883423}]

Type: LINE

Detected: here - But here, upon This bank and shoal of time, we'd

Confidence: 93.46%

Id: b7bccdac-a726-4f70-aa8d-686153f68c63

Relationships: [{}{'Type': 'CHILD', 'Ids': ['fb036f66-4530-47d6-ae05-1cf03500bb85', '4476d490-4e36-42b2-b5b6-c6309f75d14f', '0435bcbf-9a64-4edf-bf7b-26a7ba9b199b', 'ed531610-646b-4b6c-96b7-1c4067d0de91', 'c408e546-f266-4b52-83bf-6acca2d29212', 'b4d7ce5d-41c7-4299-8a38-b032ba737ee7', 'e00c8bcc-52b4-43a1-8ae6-54a7b1ea55ed', '497d9ba3-1c1a-4f32-96e1-c69223c84bde', 'fa7388fa-af57-46b3-a8e3-5ead5a957c0a', '2a03001b-ecb6-4a59-900a-2722867d9eec', '41069e5a-92eb-4b28-83a2-b4534867277b', '07ecc6f9-ece1-45e9-82dc-39db2029933b']}]]

Bounding Box: {'Width': 0.8921445608139038, 'Height': 0.033630046993494034, 'Left': 0.018029319122433662, 'Top': 0.4391741454601288}

Polygon: [{}{'X': 0.018029319122433662, 'Y': 0.4391741454601288}, {'X': 0.910150408744812, 'Y': 0.4400287866592407}, {'X': 0.910173892974855, 'Y': 0.4728041887283325}, {'X': 0.018042009323835373, 'Y': 0.4719419479370117}]

Type: LINE

Detected: jump the life to come

Confidence: 84.48%

Id: 6cd01c4a-d401-4766-98df-421d4e598e5b

Relationships: [{}{'Type': 'CHILD', 'Ids': ['4877ae71-1875-466f-a19d-38d81002f79a', 'dbae7a9d-df85-4200-81bd-c0b251044e90', '44bbd417-6a4c-42a6-b7de-7242db0fc1b6', 'cb2aa82e-0e02-428f-8de9-b3ebd0af85c0', '8717ee90-429e-48fe-8eb0-01feb020e4d1']}]]

Bounding Box: {'Width': 0.2953011095523834, 'Height': 0.0342143289744854, 'Left': 0.0270591638982296, 'Top': 0.47901806235313416}

Polygon: [{}{'X': 0.0270591638982296, 'Y': 0.47901806235313416}, {'X': 0.3223433196544647, 'Y': 0.4793039858341217}, {'X': 0.322360277175903, 'Y': 0.513232409954071}, {'X': 0.027072414755821228, 'Y': 0.5129438638687134}]

Type: LINE

Detected: If it were done when 'tis done, then 'twere well

Confidence: 99.41%

Id: 0ef4cee3-e144-41b7-8fd7-1b721d0772cd

Relationships: [{"Type": "CHILD", "Ids": ["'18a234c1-45ae-4015-866f-dae66962819", "'8c0cc360-d385-4c1e-a1c5-fd58babbe802", "'335bbc8c-99bd-4eb0-a758-1e9383ab3802", "'3d473aff-8fc6-47a5-9f24-90eb78e61b4b", "'d8c9a890-b427-42a6-a389-bd4e8cbd2157", "'caca2629-2e79-4397-bc1d-8db9eb173f28", "'177f075-fdd7-48a3-af83-3e4be81e1867", "'47bb10ea-5d10-45f4-b172-9efe2adae054", "'f829d557-abbb-4c61-8bfd-ee83a54428d1", "'0a92d4ba-2db6-4580-bcb9-2b9432d2f5ae'"]}]

Bounding Box: {"Width": 0.47035902738571167, "Height": 0.04328296706080437, "Left": 0.004754964727908373, "Top": 0.30785271525382996}

Polygon: [{"X": 0.004754964727908373, "Y": 0.3080276548862457}, {"X": 0.4749312102794647, "Y": 0.30785271525382996}, {"X": 0.47511398792266846, "Y": 0.35096433758735657}, {"X": 0.00497027114033699, "Y": 0.3511357009410858}]]

Type: LINE

Detected: It were done quickly. If the assassination

Confidence: 99.47%

Id: 7230a831-cf2b-4b32-b997-3b4ed71feece

Relationships: [{"Type": "CHILD", "Ids": ["'c86df956-95c0-42ef-9b8e-904f430b079e", "'5c121592-9a18-448b-93ac-72185cbe47e8", "'97b501bd-ad5c-48ba-90b2-eaacea55a8c1", "'9e8b1d9a-f3c9-4306-9bdc-9e73dbe87f45", "'655a2091-e3e9-4537-849b-493491e19d45", "'99ba7528-c7d2-49a9-a052-072ec8464f20", "'53db44db-483e-4467-ba6b-f4440d94b39a'"]}]

Bounding Box: {"Width": 0.4108884036540985, "Height": 0.045589856803417206, "Left": 0.004768165294080973, "Top": 0.35804805159568787}

Polygon: [{"X": 0.004768165294080973, "Y": 0.3581972122192383}, {"X": 0.4154595732688904, "Y": 0.35804805159568787}, {"X": 0.41565656661987305, "Y": 0.4034920334815979}, {"X": 0.00499513978138566, "Y": 0.40363791584968567}]]

Printed

Type: LINE

Detected: Could trammel up the consequence, and catch,

Confidence: 99.55%

Id: 34289d30-c510-46da-ac58-4bf6da8db6c6

Relationships: [{"Type": "CHILD", "Ids": ["'18a642f9-52e4-4385-a71f-82038ea04492", "'44ad56b8-9342-411e-aa04-b6ef7098a452", "'46435239-7fe2-49aa-8ecb-220b8b4d284a", "'eb2ac35f-cae6-40cd-9141-61e33cf573a0", "'bbb62540-d546-429e-9db7-17f762401f98", "'d43e6ea9-d9a1-4e3c-90fd-d0980e1d9306", "'1e13d481-1c9e-4d5d-9bc6-db5bba471d08'"]}]

Bounding Box: {"Width": 0.4280998110771179, "Height": 0.04635458439588547, "Left": 0.004376640077680349, "Top": 0.4082299768924713}

Polygon: [{"X": 0.004376640077680349, "Y": 0.4083816409111023}, {"X": 0.4322773814201355, "Y": 0.4082299768924713}, {"X": 0.4324764609336853, "Y": 0.45443642139434814}, {"X": 0.004607469774782658, "Y": 0.4545845687389374}]]

Type: LINE

Detected: With his surcease, success, that but this blow

Confidence: 98.63%

Id: 2ee5460f-f2fd-4144-a675-bac83497ec91

Relationships: [{"Type": "CHILD", "Ids": ["'4d766f26-be5f-4d7a-a9f1-28d520a559eb", "'ebce74ce-2fb8-4ecf-833a-47c1b88079f6", "'4e376efd-d2e0-4558-8e4b-de484486995a", "'dc2b4853-5f5e-479d-a3a3-bf8cca72d475", "'32126ac2-4f7f-4833-9cdb-ef570510d1d8", "'38bf04e-4057-4ba0-8b81-2bdf9921eca", "'b6a0e297-3081-4429-a55c-d00884ef1c36", "'e041697c-ce65-4910-8c72-b48ab412bec7'"]}]

Bounding Box: {"Width": 0.4527615010738373, "Height": 0.0436214581319351, "Left": 0.0033643015194684267, "Top": 0.4585230350494385}

Polygon: [{"X": 0.0033643015194684267, "Y": 0.4586794078350067}, {"X": 0.4559401571750641, "Y": 0.4585230350494385}, {"X": 0.4561258256435393, "Y": 0.5019916296005249}, {"X": 0.0035815408919006586, "Y": 0.5021445155143738}]]

Type: LINE

Detected: Might be the be-all and the end-all here -

Confidence: 99.32%

Id: f73975a8-a33c-49c6-b2cc-24ca8f2fa12d

Relationships: [{ 'Type': 'CHILD', 'Ids': ['45bf95ad-7c7f-4bd5-ae27-c5823837def7', '2df4a128-d25e-40ee-a4c1-ec62c0536f56', '5aa13735-b5a5-4f4d-b33b-39f40a1292b9', '7dc45614-b2ac-4ede-8bb6-995b992f1298', 'f7645add-8329-4a10-8395-d3d89bd41c2b', 'a177abcc-00d1-45ad-adfd-1cb9941f722f', '413f7ff2-1e16-4f6f-af53-bd5666d1e0e9', '3673b004-a972-448c-b5a4-4c02fe5fd265', '4578c3b3-f1d6-4224-b2a7-38a5fa79bbb8'] }]

Bounding Box: { 'Width': 0.4134174883365631, 'Height': 0.044975396245718, 'Left': 0.0034016536083072424, 'Top': 0.5080963969230652 }

Polygon: [{ 'X': 0.0034016536083072424, 'Y': 0.5082355737686157 }, { 'X': 0.4166247844696045, 'Y': 0.5080963969230652 }, { 'X': 0.41681915521621704, 'Y': 0.5529358983039856 }, { 'X': 0.00362576125189662, 'Y': 0.5530717968940735 }]

Type: LINE

Detected: But here, upon this bank and shoal of time,

Confidence: 99.88%

Id: d775c633-4ca5-4530-bc92-8a981593a274

Relationships: [{ 'Type': 'CHILD', 'Ids': ['97aef013-9927-49a4-831f-9376918333ad', '4d814fd2-179f-4588-a25c-6c6bfccce064', 'b849f9ac-56dc-429e-a148-32e938c42305', 'ae13a928-6838-4ba0-b205-730711fac454', 'a13fce5-fa5e-4e3a-a3e4-61fc6f22695', 'ffa790bd-ce9a-4ce6-b008-ccb6d845ba28', '7134d698-c956-4a4d-9173-d6520b4640de', '6a2504b0-5421-4735-8b34-22d6c5aeb7f4', '9a19cd65-75ec-4472-be16-1884135ef3ab'] }]

Bounding Box: { 'Width': 0.4182632267475128, 'Height': 0.04391253739595413, 'Left': 0.004438898991793394, 'Top': 0.5585809350013733 }

Polygon: [{ 'X': 0.00443889891793394, 'Y': 0.5587180256843567 }, { 'X': 0.4225127696990967, 'Y': 0.5585809350013733 }, { 'X': 0.4227021336555481, 'Y': 0.6023595929145813 }, { 'X': 0.00465764943510294, 'Y': 0.6024934649467468 }]

All correct;
the
confidence
level is nearly
perfect 100%.

Type: LINE

Detected: We'd jump the life to come.

Confidence: 99.67%

Id: 02042968-22f4-4cad-bf71-f7e51a77f548

Relationships: [{ 'Type': 'CHILD', 'Ids': ['1b7383db-2599-4b3b-8124-359124ee140d', '7619aa55-a601-4ca4-8f1c-0dd4b5ebb9bc', 'f7f0546a-1cac-4b97-96c9-97e28690363c', '009d2025-0b05-4668-8550-a391b01ae0b4', 'b3b0ff9e-e0db-4cf6-9aae-ca899db8924e', '62737ac7-fc88-46f8-bc13-3982511d064'] }]

Bounding Box: { 'Width': 0.26191526651382446, 'Height': 0.046292126178741455, 'Left': 0.0034823252353817225, 'Top': 0.6080835461616516 }

Polygon: [{ 'X': 0.0034823252353817225, 'Y': 0.6081670522689819 }, { 'X': 0.26518601179122925, 'Y': 0.6080835461616516 }, { 'X': 0.2653975784778595, 'Y': 0.6542942523956299 }, { 'X': 0.003713323501870036, 'Y': 0.6543756723403931 }]

Type: LINE

Detected: The Pythagoras theorem states that "In a right-angled triangle, the square of the hypotenuse side is

Confidence: 99.64%

Id: a121da99-01b9-4e8c-8692-07261987d32d

Relationships: [{ 'Type': 'CHILD', 'Ids': ['5c0e50df-fe28-4349-b5c6-907656daaaeb', 'b01355da-d7e1-458a-a09a-07ca8f1c17e9', '77d29bd6-b314-469c-b531-2ec5bf5511ad', '8d404d46-1071-475d-b113-b66d13210e7b', '0fa6fd2-f234-4ebd-a90f-42847fa187fa', '73b936f2-37ef-4d74-b6ad-a3068f435395', '1a39415d-5cb1-40bf-8065-523921945317', 'f1e415f4-ef28-49ab-94c9-750462f8450d', '900f41a0-1113-44ba-bf54-541a8347b585', '68ccadf0-a344-4b76-90e3-ffb87fcf28a8', 'edc09994-c71a-479f-89dd-a5a89244dc48', '8a2d1635-79e4-498c-a544-483109b7f903', '8642d9fc-c958-48d8-aa4b-0ac2bc5208f5', '7ccebb58-9fe2-4302-b908-101c99f7c6aa', '426c4b37-05f6-464f-a352-be399b6ee4ee', '9d473e81-fe5b-410c-aa95-c62d577c584'] }]

Bounding Box: { 'Width': 0.980600893497467, 'Height': 0.04607046768069267, 'Left': 0.003983855247497559, 'Top': 0.70918869972229 }

Polygon: [{ 'X': 0.003983855247497559, 'Y': 0.7094841003417969 }, { 'X': 0.9844280481338501, 'Y': 0.70918869972229 }, { 'X': 0.9845847487449646, 'Y': 0.7549716830253601 }, { 'X': 0.004212686326354742, 'Y': 0.7552591562271118 }]

3. Math language

The Pythagoras theorem states that “In a right-angled triangle, the square of the hypotenuse side is equal to the sum of squares of the other two sides” Or we can say: $A^2+B^2 = C^2$ C = whole square root of A^2+B^2 B = whole square root of $C^2 - A^2$ A = whole square root of $C^2 - B^2$ Right angled = 90 degrees Hypotenuse = Side opposite to the right angle.

The Pythagoras theorem states that “In a right-angled triangle, the square of the hypotenuse side is equal to the sum of squares of the other two sides” Or we can say : $A^2 + B^2 = C^2$ C = whole square root of $A^2 + B^2$ B = whole square root of $C^2 - A^2$ A = whole square root of $C^2 - B^2$ Right angled 90 degrees Hypotenuse = side opposite to the right angle .

Results

The Pythagoras theorem states that "In a right-angled triangle, the square of the hypotenuse side is equal to the sum of squares of the other two sides". Or we can say : $A^2 + B^2 = C^2$ $C = \text{whole square root of } A^2 + B^2$ $B = \text{whole square root of } C^2 - A^2$ $A = \text{whole square root of } C^2 - B^2$ Right angled 90° degrees Hypotenuse = side opposite to the right angle.

Type: LINE

Detected: The Pythagoras theorem states that "In a right-angled triangle, the

Confidence: 85.36%

Id: 3ca794b6-a60c-457f-b3e9-b51a568a2c9f

Relationships: [{"Type": "CHILD", "Ids": ["ed909678-9c1b-4e00-ae22-eabbcc636c1b", "997c32cf-1a90-4748-9530-37772a5da9f6", "4791242e-67fd-4394-bdb9-b2ca1f69194d", "814ab467-aae4-413e-9c2a-95558ec4aff3", "c262a54b-45fe-4d57-a9aa-9488934607a9", "fb3425f5-6672-4771-aeb8-251e99eb574a", "fa862cff-439d-4b17-9989-5ccff2132bd7", "f3662b0e-4290-4f4a-a82b-480d9f77f8ef", "2785c2a7-e72b-47c1-9f83-268b888a8e42", "676b9a23-8aa0-4a94-b0c1-bc9683fed535", "2229551d-7d98-467c-bdd5-c3957f13be4d"]}]

Bounding Box: {"Width": 0.943009129676819, "Height": 0.03970775008201599, "Left": 0.02079223096370697, "Top": 0.5570563673973083}

Polygon: [{"X": 0.02079223096370697, "Y": 0.5570563673973083}, {"X": 0.9637735486030579, "Y": 0.5579885840415955}, {"X": 0.96380215883255, "Y": 0.5967641472816467}, {"X": 0.020807282999157906, "Y": 0.5958223938941956}]]

Type: LINE

Detected: square of the hypotenuse side 13 equal to the sum of Squares of

Confidence: 89.96%

Id: 3d6f6e8d-a7a1-4cc0-b2dd-b2f85133c8d2

Relationships: [{"Type": "CHILD", "Ids": ["a510242e-89f6-4980-be62-a039d8d0e794", "fff3f35f-58ff-4e75-ac06-a07e2af36afa", "5c44190d-7913-4bc5-a2d9-b1bbca19753d", "ca0adbfb0-a2ce-44a3-9094-53f47a1719c6", "3319c30a-1e2f-42c6-9da7-b83c67382fef", "af9924e7-347e-4c07-9a1a-2f47adc12de3", "de0ad474-b8e6-4b22-8c8f-26f6b300d9d6", "19b35c49-29a4-4b2b-8e45-3e2aa11f32a5", "fc3d6998-947a-4c72-81a6-12b400ab003c", "0ca480a9-457a-4d15-bac0-bedebe7edfa64", "81b018eb-0398-41a4-9653-706dfffb5756b", "178da7e4-13a7-467a-9d36-6e0190ff6ec8", "53822ac8-9476-4188-86af-df505c03158e"]}]

Bounding Box: {"Width": 0.9304165840148926, "Height": 0.043620068579912186, "Left": 0.00883133988827467, "Top": 0.5952757596969604}

Polygon: [{"X": 0.00883133988827467, "Y": 0.5952757596969604}, {"X": 0.9392168521881104, "Y": 0.5962047576904297}, {"X": 0.9392479658126831, "Y": 0.6388958096504211}, {"X": 0.008847721852362156, "Y": 0.6379565000534058}]]

Type: LINE

Detected: the other two sides" Or we can say: A² + B² = C² (=whole

Confidence: 82.79%

Id: f7120536-2f64-458b-b795-8884c395daa2

Relationships: [{"Type": "CHILD", "Ids": ["91f007cf-a9df-4bdd-8c6c-0947a1a9e3e1", "52736b9c-4ad0-41eb-8966-5f3c86451063", "306e2238-2e6a-4881-b951-03476796abdf", "5166c3be-47a2-4d19-b032-2fc8b56e0bd4", "6f0ec1ed-29cd-4377-87a0-a6db8b5342ff", "ec70d0d1-5358-4397-bc65-9a5dd2d18f1c", "1a81e75e-9b3b-4255-9887-79d9bab54aef", "d1c7ecfc-644e-413a-9d20-b1b44514b346", "61928a36-17ff-414c-a05b-65b8ad918a78", "5216a392-6e43-4d46-86fa-e648187fed3f", "a74f8539-a308-4d73-bc0f-a1d10565268c", "2ee33582-dcb1-45b7-a96e-0a6de4a3a176", "dfcd4894-aa51-4ca7-87f9-871f821dbeed", "0522680b-a66a-4f44-aa53-c30285984fcc"]}]

Bounding Box: {"Width": 0.9149110317230225, "Height": 0.03563114255666733, "Left": 0.03693429008126259, "Top": 0.632679283618927}

Polygon: [{"X": 0.03693429008126259, "Y": 0.632679283618927}, {"X": 0.951819896697998, "Y": 0.633601725101471}, {"X": 0.9518453478813171, "Y": 0.6683104634284973}, {"X": 0.03694796934723854, "Y": 0.6673797965049744}]]

Type: LINE

Detected: **not** of B Whole square **noot** of C=A2 A = whole

Confidence: 86.05%

Id: e44ca128-3f2a-138-b3b1-4185a707059a

Relationships: [{}{'Type': 'CHILD', 'Ids': ['14fdf4ac-966c-4200-8348-fb3b53b8759b', '16d53a4a-9e12-4737-a09f-5b86be87c954', '769aa159-f664-4e40-b916-7e888b3abe14', '69272e66-244c-43b8-a4b3-14cd16358b89', '03155418-d992-4bfe-a9be-69936f8e68c4', '7cfe4046-832e-465d-8782-5453be80a1c9', '1d467609-2542-4958-822e-471b77fe4b69', 'b50d9e8f-e75-4aeb-94c2-cf7b8a52a41c', '8702bc87-9580-4c8d-83ff-3a3308eb72b5', '03b7c012-075f-4770-a22f-90132b4595bc', 'bdae232f-6b5f-4521-adba-4b4671f6f4eb']}]

Bounding Box: {'Width': 0.8226267695426941, 'Height': 0.03282729536294937, 'Left': 0.12323839962482452, 'Top': 0.6654853820800781}

Polygon: [{}{'X': 0.12323839962482452, 'Y': 0.6654853820800781}, {'X': 0.9458417892456055, 'Y': 0.6663217544555664}, {'X': 0.9458651542663574, 'Y': 0.6983126997947693}, {'X': 0.1232520267367363, 'Y': 0.6974694728851318}]

Type: LINE

Detected: **square**

Confidence: 87.49%

Id: 7a7790f9-3c86-4ef5-9eb0-9eeaac454e38

Relationships: [{}{'Type': 'CHILD', 'Ids': ['771c3c0c-5690-4759-b3e1-4dfa2b97a570']}]

Bounding Box: {'Width': 0.05926099047064781, 'Height': 0.01791897788643837, 'Left': 0.03918954357504845, 'Top': 0.6884250640869141}

Polygon: [{}{'X': 0.03918954357504845, 'Y': 0.6884250640869141}, {'X': 0.09844309091567993, 'Y': 0.6884856224060059}, {'X': 0.09845053404569626, 'Y': 0.7063440084457397}, {'X': 0.039196599274873734, 'Y': 0.7062831521034241}]

Type: LINE

Detected: square **not** of C' B2 Right angled 90 degrees Hypotenuse =

Confidence: 90.89%

Id: 5956ecaa-33d5-46ec-ba3c-049a764aa6e7

Relationships: [{}{'Type': 'CHILD', 'Ids': ['1fd8bb811-fefa-444f-ac37-f4d0f075687b', '62799675-7f3f-4e6c-892b-4d34af174cfb', '794e311f-fdd7-4ad0-93c8-b3e8984d7312', '1e35ac4e-3a77-49ed-8a8b-aac1424714b7', '31811b40-f3d7-4de0-a768-f2e573938822', '5c67c523-ebfc-45bc-b6e4-5aeb38d7b460', '96d323c7-7d6a-4b4d-9057-8ba6de09cea3', '76de4637-795d-4571-b5b5-7a617e966484', '218ef591-9f71-489a-9772-81042f3077da', '1409b8f7-1961-4552-a6be-4b9e7152c4dd']}]

Bounding Box: {'Width': 0.8945172429084778, 'Height': 0.039827462285757065, 'Left': 0.042370133101940155, 'Top': 0.7045480012893677}

Polygon: [{}{'X': 0.042370133101940155, 'Y': 0.7045480012893677}, {'X': 0.936859130859375, 'Y': 0.7054665088653564}, {'X': 0.9368873834609985, 'Y': 0.744375467300415}, {'X': 0.04238554462790489, 'Y': 0.7434478998184204}]

Type: LINE

Detected: side opposite to the **right** angle.

Confidence: 88.23%

Id: 610f51d0-664d-478b-9c27-b8c2a39ad867

Relationships: [{}{'Type': 'CHILD', 'Ids': ['034203a0-eced-4af5-8ab7-889259b9313d', '03ecc686-5fd0-4598-9bf1-35b1c4ac1f32', '5c10b47c-4f83-4c3c-a624-0118da4873e4', '83c257ee-722e-4bac-896a-9d8a7724b1fb', 'a9267f0b-ca41-455f-852c-6c400dff509', 'a9ba510d-10a0-443c-9adf-d2ff56215aa9']}]

Bounding Box: {'Width': 0.4403853416442871, 'Height': 0.029475176706910133, 'Left': 0.038963399827480316, 'Top': 0.7511011958122253}

Polygon: [{}{'X': 0.038963399827480316, 'Y': 0.7511011958122253}, {'X': 0.4793325364589691, 'Y': 0.7515587210655212}, {'X': 0.479348748922348, 'Y': 0.7805764079093933}, {'X': 0.038974858820438385, 'Y': 0.78011554479599}]

Correct percentage: 59/72 = 81.94%

Printed

Type: LINE

Detected: The Pythagoras theorem states that "In a right-angled triangle, the square of the hypotenuse side is Confidence: 99.64%

Id: a121da99-01b9-4e8c-8692-07261987d32d

Relationships: {[{"Type": "CHILD", "Ids": ["'5c0e50df-fe28-4349-b5c6-907656daaaeb", "'b01355da-d7e1-458a-a09a-07ca8f1c17e9", "'77d29bd6-b314-469c-b531-2ec5bf5511ad", "'8d404d46-1071-475d-b113-b66d13210e7b", "'0fa6fd2-f234-4ebd-a90f-42847fa187fa", "'73b936f2-37ef-4d74-b6ad-a3068f435395", "'a39415d-5cb1-40bf-8065-523921945317", "'f1e415fa-e7f8-49ab-94c9-750462f8450d", "'900f41a0-1113-44ba-bf54-541a8347b585", "'68ccadf0-a3"}]

44-4b76-90e3-ffb87cfb28a8", "'edc09994-c7la-479f-89dd-a5a89244dc48", "'8a2d1635-79e4-4c5208f15", "'7ceb5b8-9fe2-4302-b908-101c99f7c6aa", "'426c4b37-05f6-464f-a352-be399b6ee

Bounding Box: {"Width": 0.980600893497467, "Height": 0.04607046768069267, "Left": 0.

Polygon: [{"X": 0.003983855247497559, "Y": 0.7094841003417969}, {"X": 0.984428048133, "Y": 0.7552591562271118}]} 6, "Y": 0.7549716830253601}, {"X": 0.004212686326354742, "Y": 0.7552591562271118}]

Type: LINE

Detected: equal

Confidence: 99.46%

Id: d217e2fa-e199-4040-b429-4cc32f1e3e4b

Relationships: {[{"Type": "CHILD", "Ids": ["'129ca84f-9eeae-4c03-82bd-2f1b0e2b4545'"]}]}

Bounding Box: {"Width": 0.048542320728302, "Height": 0.042038969659568085, "Left": 0.}

Polygon: [{"X": 0.0043568876571953, "Y": 0.7615156173706055}, {"X": 0.052692394703626044, "Y": 0.8035266995429993}, {"X": 0.004566964227706194, "Y": 0.8035404682159424}]}

Type: LINE

Detected: to

Confidence: 99.96%

Id: 392a3cc7-c75f-4e68-807a-bb70b4580769

Relationships: {[{"Type": "CHILD", "Ids": ["'0e6a8fc3-4a49-4798-9dba-51a74ccb51e6'"]}]}

Bounding Box: {"Width": 0.019453437998890877, "Height": 0.0351651877164841, "Left": 0.}

Polygon: [{"X": 0.0627607032089233, "Y": 0.7626198530197144}, {"X": 0.0820508748292906, "Y": 0.7961252331733704}, {"X": 0.06292513757944107, "Y": 0.7961307168066897}]} 6,

Type: LINE

Detected: the sum of squares of the other two sides" Or we can say: A2+B2 = C2 C = whole square root

Confidence: 99.13%

Id: 364609f3-3d25-46b6-93fe-14b92074c104

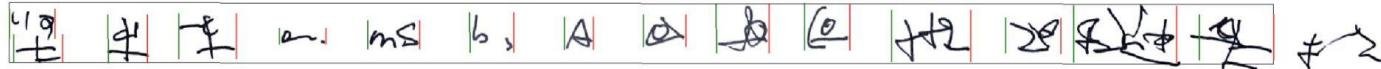
Relationships: {[{"Type": "CHILD", "Ids": ["'1623f6ee-a2cf-46b9-a756-e3468846bf01", "'aa8509ff-2451-4b39-9316-2dc85013305c", "'ea46fc8f-35d0-4bab-a159-f77eda50547d", "'318b7fa8-c7c5-418f-97c4-db1037b627f3", "'2c211c21-4e72-4931-9eb2-eefbea3618c3", "'cb6da86-4a0f-490e-b784-326fb320fb8d", "'75567810-68e6-4e97-c9d4-e0dede6f6548", "'8eb1e4ed-e5b3-4e71-84e4-c91c2508bbd1", "'9e34b098-e888-45af-a23b-a01b5061fd8", "'f3b0b17e-2171-43e2-a83d-d436ee5eb456", "'131cb8d9-5c14-47a3-9b9e-27731faf6c9b", "'ddc3db21-352d-47a4-8df8-7441a785597", "'aea3c9ec-a229-4528-a229-4528-9b9b5e0f", "'e28e0fb-5abd-49a9-8a05-6ebd34815991", "'199a83b5-e1c1-4564-ad73-9557baa3c27f", "'e72be14c-5731-4047-8d47-72c7995b37fe", "'10ac2fd3-1690-4574-8644-846250ce6c", "'e6800c6c-8ae3-4235-a6e-5fabf046d837"]}]}

Bounding Box: {"Width": 0.8823762536048889, "Height": 0.045748546719551086, "Left": 0.09256380796432495, "Top": 0.7590905427932739}

Polygon: [{"X": 0.09256380796432495, "Y": 0.7593486309051514}, {"X": 0.9747835993766785, "Y": 0.7590905427932739}, {"X": 0.9749400615692139, "Y": 0.8045881390571594}, {"X": 0.09278476238250732, "Y": 0.8048391342163086}]} 9,

All correct; the confidence level is nearly perfect 100%.

4. Random Characters



Type: LINE

Detected: 42 t & of an. ms b, A 0 & (o H2 X sh &

Confidence: 68.70%

Id: c9a194e2-9f68-4ac1-8f5a-a50b9ad69739

Relationships: [{}{'Type': 'CHILD', 'Ids': ['e08dc19d-aab5-437a-9a3c-3276f44f942b', '2fb984bc-1493-4fe7-8178-f549cc4d0027', '4a1b9ada-ce55-4be3-95bf-330058cdf921', 'a23f539b-db47-417a-90ee-56502f4f716a', '0b1c0732-61ac-4189-9f25-ef55d6a5bc42', '2b791f57-f52d-4314-aed0-d03caabdf e73', '648c02f8-4bbd-4d9b-9680-05692e17deea', '3b1b533e-12ef-42b5-ae5d-8fa8b3ed5f51', '05982a18-fb3c-499f-ada5-86dc15ceac58', '7a9a09d1-307e-474e-a808-caa4437aaec8', '1bd64d31-3c0f-4566-b2fb-8fcce0f67a81', '28f4681b-5525-4df7-a1f0-9b367a107baf', 'd789359d-168c-4269-a6af-8a1a0 4d549f1', 'a9b68866-f5d3-4d27-88b7-9283a3dd250b', '2cbbb336-f577-4b22-a44f-792c228328d5']}]

Bounding Box: {'Width': 0.8523874878883362, 'Height': 0.03238876163959503, 'Left': 0.04417043924331665, 'Top': 0.8481518030166626}

Polygon: [{}{'X': 0.04417043924331665, 'Y': 0.8481518030166626}, {'X': 0.8965355157852173, 'Y': 0.8490588665008545}, {'X': 0.896557927131652 8, 'Y': 0.8805405497550964}, {'X': 0.04418293014168739, 'Y': 0.8796265125274658}]

Conclusion

1. Modern Language

Correct percentage: $79/84 = 94\%$
2. Shakespeare so called “old English”

Correct percentage: $53/55 = 96.36\%$
3. Math characters

Correct percentage: $59/72 = 81.94\%$