

Using Tech Giants for Data Rescue:

Amazon Textract

Google Vision

OpenAI ChatGPT

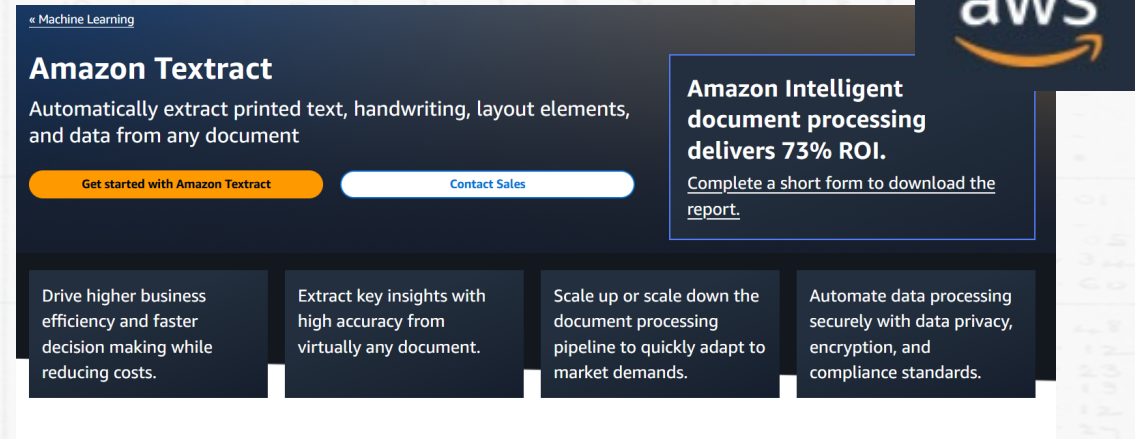


I asked ChatGPT for a stylised illustration of 'someone using Amazon and Google to get the job done'.

“Transcription is fundamentally slow - speeds in these projects vary from 6 observations/minute to 1 observation every 3 minutes. It also consumes a lot of work - from 0.2 to 2.2 person-minutes for each observation. This is the major current limitation: the number of observations remaining to be transcribed is unknown, but 1 billion (1,000,000,000) is a reasonable planning number. At typical rates shown above, this will take of order 100 years elapsed, (and 500 person-years effort). This is too long - we must go faster.”

“Document transcription is not a climate-specific problem - it is valuable to many fields.”

[Approaches to transcription of weather observations](#) (Brohan, 2018)



Machine Learning

Amazon Textract

Automatically extract printed text, handwriting, layout elements, and data from any document

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- Extract key insights with high accuracy from virtually any document.
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- Automate data processing securely with data privacy, encryption, and compliance standards.

Vision AI

Use our game-changing fully managed development environment Vertex AI Vision to create your own computer vision applications or derive insights from images and videos with pre-trained APIs, AutoML, or custom models.

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- ✓ Spin up new video and image analytics applications in minutes
- ✓ Train machine learning models that classify images using AutoML or custom models
- ✓ Detect objects, read handwriting, and build valuable image metadata with pre-trained APIs
- ✓ Easily integrate with BigQuery, Cloud Functions, and your cameras to enable end to end journey

 OpenAI
ChatGPT

LOG OF THE UNITED STATES SHIP FARRAGUT (348)

AT PASSAGE Hawaiian Area TO Thursday 8 January 19 42

ZONE DESCRIPTION Plus 10 G.P. HUNTER, Commander U. S. Navy, Commanding.

Main observation table with columns for Time, Wind, Barometer, Temperature, Clouds, and Sea.

Latitude and Longitude data for various points.

Current Set 150 Drift 1 kt.

GYROCOMPASS IN USE Error.

STANDARD MAG. COMPASS Compass No. 213 Error 029

DRILLS AND EXERCISES table with columns for Morning and Afternoon activities.

SUBMERGED RUN DATA—SUBMARINE

Table for submerged run data with columns for Run No., Time to submerge, and Greatest depth.

LOG OF THE UNITED STATES SHIP FARRAGUT (348)

AT PASSAGE Hawaiian Area TO Thursday 8 January 19 42

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GYROCOMPASS IN USE Error.

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SUBMERGED RUN DATA—SUBMARINE

Table for submerged run data with columns for Run No., Time to submerge, and Greatest depth.

LOG OF THE UNITED STATES SHIP

FARRAGUT (348)

(Identification Number)

AT PASSAGE Hawaiian Area TO Thursday 8 January, 1942

ZONE DESCRIPTION Plus 10 1/2 G.P. HUNTER, Commander. U. S. Navy, Commanding.

Hour	BY REVS.					COURSE (P. C.) Gyro Mag. (Indicate which)	WIND		BAROMETER		TEMPERATURE			WEATHER, BY SYMBOLS	CLOUDS			SEA		
	NAUTICAL MILES	TENTHS	NAUTICAL MILES	TENTHS	NAUTICAL MILES		DIRECTION	FORCE	HEIGHT IN INCHES	READING AT THE.	AIR, DRY BULB	AIR, WET BULB	WATER AT SURFACE		FORM	MOVING FROM	AMOUNT	VISIBILITY	CONDITION	SWELLS FROM
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
A.M.																				
1	111.5	11	9			220	SW	4	2992		75	74	74	c	cu	SW	7	15	2	SW
2	100.5	10	6			220	SW	3	2991		75	73	74	b	cu	SW	1	15	2	SW
3	99.5	10	5			220	SW	4	2991		75	73	74	b	-	-	-	20	2	SW
4	98.5	10	4			220	SW	4	2992		75	73	74	b	-	-	-	20	2	SW
5	97.5	10	3			220	W	4	2992		75	73	74	bc	cu	SW	2	25	2	SW
6	100.5	10	7			220	SW	4	2993		75	73	74	bc	cu	SW	2	35	2	SW
7	163.5	17				040	SW	3	2994		75	73	74	bc	cu	SW	5	50	2	SW
8	150.5	15	8			040	SW	3	2996		75	74	74	bc	alcu	SW	5	50	2	SW
9	149.5	15	7			040	W	4	2998		75	74	74	b	cicu	W	2	50	2	W
10	147.5	15	5			949	W	4	2997		75	75	74	bc	cicu	W	2	50	2	W
11	150.5	15	8			040	W	4	2996		74	74	74	bc	alcu	W	4	40	2	W
12	149.5	15	7			040	W	4	2997		75	74	74	bc	cu	W	5	50	2	W

Latitude	22 17 15 N
Longitude	158 05 00 W
Latitude	22 58 30 N
Longitude	157 39 00 W
Latitude	23 12 00 N
Longitude	156 37 00 W
Current	Set 150 Drift 1 kt.
GYROCOMPASS IN USE	Error 0
STANDARD MAG. COMPASS	Compass No. 213 S. H. 029 Error 11 E Variation 11-30E Deviation 30W

Fuel	Received 0 Expended 9899 On hand 67083
Water	Distilled 4210 Received 0 Expended 4955 On hand 7455
BEFORE LEAVING PORT	
Draft for'd	
Draft aft.	
AFTER ENTERING PORT	
Draft for'd	
Draft aft.	
MAGAZINE TEMPERATURES:	
Maximum 79	
Minimum 75	
Conditions normal.	

DRILLS AND EXERCISES	
Morning	Afternoon
1	
2	
3	
4	
5	
6	
7	
8	
9	

LOG OF THE UNITED STATES SHIP

FARRAGUT (348)

(Identification Number)

AT PASSAGE Hawaiian Area TO Thursday 8 January, 1942

ZONE DESCRIPTION Plus 10 1/2 G.P. HUNTER, Commander. U. S. Navy, Commanding.

THOTE	BY REVS.					COURSE (P. C.) Gyro Mag. (Indicate which)	WIND		BAROMETER		TEMPERATURE			WEATHER, BY SYMBOLS	CLOUDS			SEA		
	NAUTICAL MILES	TENTHS	NAUTICAL MILES	TENTHS	NAUTICAL MILES		DIRECTION	FORCE	HEIGHT IN INCHES	READING AT THE.	AIR, DRY BULB	AIR, WET BULB	WATER AT SURFACE		FORM	MOVING FROM	AMOUNT	VISIBILITY	CONDITION	SWELLS FROM
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
A.M.																				
1	111.5	11	9			220	SW	4	2992		75	74	74	c	cu	SW	7	15	2	SW
2	100.5	10	6			220	SW	3	2991		75	73	74	b	cu	SW	1	15	2	SW
3	99.5	10	5			220	SW	4	2991		75	73	74	b	-	-	-	20	2	SW
4	98.5	10	4			220	SW	4	2992		75	73	74	b	-	-	-	20	2	SW
5	97.5	10	3			220	W	4	2992		75	73	74	bc	cu	SW	2	25	2	SW
6	100.5	10	7			220	SW	4	2993		75	73	74	bc	cu	SW	2	35	2	SW
7	163.5	17				040	SW	3	2994		75	73	74	bc	cu	SW	5	50	2	SW
8	150.5	15	8			040	SW	3	2996		75	74	74	bc	alcu	SW	5	50	2	SW
9	149.5	15	7			040	W	4	2998		75	74	74	b	cicu	W	2	50	2	W
10	147.5	15	5			949	W	4	2997		75	75	74	bc	cicu	W	2	50	2	W
11	150.5	15	8			040	W	4	2996		74	74	74	bc	alcu	W	4	40	2	W
12	149.5	15	7			040	W	4	2997		75	74	74	bc	cu	W	5	50	2	W

Latitude	22 17 15 N	Received	0
Longitude	158 05 00 W	Expended	9899
		On hand	67083
Latitude	22 58 30 N	Distilled	4210
Longitude	157 39 00 W	Received	0
		Expended	4955
		On hand	7455
Current	Set 150 Drift 1 kt.	BEFORE LEAVING PORT	
		Draft for'd	
		Draft aft.	
GYROCOMPASS IN USE			
Error 0			
AFTER ENTERING PORT			
Draft for'd			
Draft aft.			
STANDARD MAG. COMPASS			
Compass No. 213			
S. H. 029			
Error 11 E			
Variation 11-30E			
Deviation 30W			
MAGAZINE TEMPERATURES:			
Maximum 79			
Minimum 75			
Conditions normal.			



Boto3 1.34.55 documentation

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[Quickstart](#)

[A Sample Tutorial](#)

[Code Examples](#)

[Developer Guide](#)

[Security](#)

[Available Services](#)

[Core References](#)

[Customization References](#)

Boto3 documentation

<https://boto3.amazonaws.com/v1/documentation/api/latest/index.html>

You use the AWS SDK for Python (Boto3) to create, configure, and manage AWS services, such as Amazon Elastic Compute Cloud (Amazon EC2) and Amazon Simple Storage Service (Amazon S3). The SDK provides an object-oriented API as well as low-level access to AWS services.

Note

Documentation and developers tend to refer to the AWS SDK for Python as "Boto3," and this documentation often does so as well.

Quickstart

- [Quickstart](#)
 - [Installation](#)
 - [Configuration](#)
 - [Using Boto3](#)
- [A Sample Tutorial](#)
 - [SQS](#)
 - [Creating a queue](#)
 - [Using an existing queue](#)
 - [Sending messages](#)
 - [Processing messages](#)
- [Code Examples](#)
 - [Amazon CloudWatch examples](#)
 - [Amazon DynamoDB](#)
 - [Amazon EC2 examples](#)
 - [AWS Identity and Access Management examples](#)
 - [AWS Key Management Service \(AWS KMS\) examples](#)
 - [Amazon S3 examples](#)
 - [AWS Secrets Manager](#)
 - [Amazon SES examples](#)
 - [Amazon SQS examples](#)

```
#!/usr/bin/env python
```

```
# Run Textract on the DWR 1901 sample image
```

```
import pickle
import boto3
import json
```

```
# Load the jpeg
```

```
with open("../..../samples/Farragut-DD-348-1942-01-0021.jpg", 'rb') as jf:
    ie=jf.read()
```

```
# Analyze the document
```

```
client = boto3.client('textract')
response = client.analyze_document(Document={'Bytes': ie},
                                   FeatureTypes=['TABLES'])
```

```
# Save the resulting JSON
```

```
pickle.dump(response, open("detection.pkl", "wb" ))
with open('detection.txt', 'w') as file:
    file.write(json.dumps(response,indent=4))
```

User guides

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```

```

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          ]
        }
      ]
    }
  ]
}
```

March 1st WEATHER REPORT. 1862.

EIGHT A.M.

Station	B.	E.	M.	D.	F.	C.	I.	R	5%
Nairn	30.26	35	33	SE	1	9	0	-	4
Aberdeen	30.24	34	34	NNE	4	8	0	-	3
Leith	30.21	40	37	E	1	7	0	-	1
Berwick	30.23	43	39	ESE	2	9	0	-	4
Ardrossan	30.24	38	36	E	3	8	0	-	3
Portrush	30.22	38	36	E	1	6	0	-	1
Galway	30.09	40	38	NE	2	8	0	-	1
Shields	30.20	39	36	E	3	5	4	-	3
Searborough	30.14	39	35	E	4	8	4	-	5
Heligoland	30.10	34	33	ENE	3	2	6	-	3
Liverpool	30.16	38	35	E	2	4	uw	-	2
Queenstown	30.00	44	43	ESE	4	4	0	-	2
Valentia	29.99	42	39	E	3	4	c	-	2
Yarmouth	30.08	39	36	ENE	6	5	c	-	6
London	30.04	40	34	ESE	5	9	0	-	-
Dover	30.01	39	38	ESE	9	9	0	-	8
Portsmouth	29.96	40	34	E	3	8	uw	-	2
Portland	29.94	40	38	E	5	9	uw	-	6
Plymouth	29.90	40	38	E	8	4	0	-	5
Penzance	29.93	42	41	ESE	5	8	34	0.25	5
Copenhagen	29.96	21	-	N	4	1	6	-	5
Helder	30.06	35	-	ENE	3	5	c	-	5
Brest	29.82	42	-	E	1	9	uw	-	1
Bayonne	29.41	45	-	E	2	9	f	-	1
Lisbon									

Sunday Previous to this Report *Probable* *Probable before* *Monday.*

N. BRITAIN... E. to N. moderate E. to N. L w. moderate
to fresh - fine -

IRELAND... N.E. to S.E. moderate E. to S. L to S.W. fresh -
to fresh - fine - some rain -

CENTRAL... As next above - As next above -

E. COAST... N.E. to S.E. fresh to moderate E. to S. moderate to fresh

S. ENGLAND... E. to S. fresh - some rain in places. E. to S. L to S.W. fresh - some rain

Explanation.
B.—Barometer corrected and reduced to 32° at mean sea level: each ten feet, of vertical rise, causing about one hundredth of an inch diminution; and each ten degrees, above 32°, causing nearly three hundredths increase. E.—Exposed thermometer in shade. M.—Moistened bulb (for evaporation and dew point). D.—Direction of wind (true—two points left of magnetic). F.—Force (1 to 12—estimated). C.—Cloud (1 to 9). I.—Initials: b.—blue sky; c.—clouds (detached); f.—fog; h.—hail; l.—lightning; m.—misty (hazy); o.—overcast (dull); r.—rain; s.—snow; t.—thunder; S.—Sea-disturbance (1 to 9). A.—Wet rain-fall, or snow, or hail, since last report, in inches and decimals. N.—Calm.

March 1st WEATHER REPORT. 1862.

EIGHT A.M.

Station	B.	E.	M.	D.	F.	C.	I.	R	5%
Saturday									
Nairn	30.26	35	33	SE	/	g	0	-	4
Aberdeen	30.24	34	34	NNE	4	8	0	-	3
Leith	30.21	40	37	E	/	7	0	-	/
Berwick	30.23	43	39	ESE	2	g	0	-	4
Ardrossan	30.24	38	36	E	3	8	0	-	3
Portrush	30.22	38	36	E	/	b	0	-	/
Galway	30.09	40	38	NE	2	8	a	-	/
Shields	30:20	39	36	E	3	5	4	-	3
Searborough	30.14	39	35	E	4	8	r	-	5
Heligoland	30.10	34	33	ENE	3	2	b	-	3
Liverpool	30.16	38	35	E	2	y	nu	-	2
Queenstown	30.00	44	43	ESE	4	y	0	-	2
Valentia	29.99	42	39	E	3	4	c	-	2
Yarmouth	30.08	39	36	ENE	b	5	C	-	b
London	30.04	40	34	ESE	5	g	0	-	-
Dover	30.01	39	38	ESE	g	g	D	-	8
Portsmouth	29.96	40	34	E	3	8	aw	-	2
Portland	29.94	40	38	E	5	g	we	-	6
Plymouth	29.90	40	38	E	8	y	0	-	5
Penzance	29.93	42	41	ESE	5	8	3M	0.25	5
Copenhagen	29.96	21	-	N	4	/	f	-	5
Helder	30.06	35	-	ENE	3	5	c	-	5
Brest	29.82	42	-	E	/	g	w	-	/
Bayonne	29.41	45	-	E	2	g	f	-	/
Lisbon									

Sunday Previous to this Report Probable Probable before Monday.

NBRITAIN E. to N. moderate E. to N. L w. moderate

to fresh - fine -
IRELAND N.E. to S.E. moderate E. to S. L to S.W. fresh.

to fresh - fine - some rain -
CENTRAL As next above. As next above.

E. COAST N.E. to S.E. fresh to moderate E. to S. moderate to fresh

SENGLAND. E. to S. fresh - some rain in places. E. to S. L to S.W. fresh - some rain

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DAILY WEATHER REPORT

for 8 a.m. on Friday, 1st March, 1901.
Issued by the Meteorological Office, 63, Victoria Street, London. W. N. SHAW, Secretary.

STATIONS.	YESTERDAY EVENING. (See note on last page.)					THIS MORNING. (See note on last page.)					PAST 24 HOURS								
	Barom.	Temp.	Wind.	Force	Weather	Barometer.	Temperature.	Wind.	Force	Weather.	Temp.	Temp.	Temp.	Sunshine.	Rainfall.				
	At 32° and M.S.L.	Dry Bulb.	Dirac.	Force (in lbs)		At 32° and M.S.L.	Change since Yesterday.	Dry Bulb.	Wet Bulb.	Change since Yesterday.	Dirac.	Force (in lbs)	Wet Bulb.	Weather.	Max.	Min.	Hours.	Ins.	
SCANDINAVIA.																			
Haparanda	29.87	-11	Z	0	b	30.06	+ 11	-13	7	-	H	2	m	10	24	-	-	-	-
Hernösand	29.83	1	Z	0	b	30.03	+ 13	- 8	- 9	- 19	Z	0	b	19	8	-	-	-	-
Stockholm	29.66	19	H	4	o	29.94	+ 15	15	14	- 13	HNE	2	o	8	3	16	-	-	-
Wisby	29.57	21	NE	4	S	29.75	+ 14	15	17	- 7	HNE	4	o	8	3	23	-	-	0.12
Karlstad	29.94	18	E	2	b	29.91	+ 50	5	7	- 19	Z	0	b	13	1	-	-	-	-
Färder (Ålana Fjord)	29.63	24	NE	6	c	29.82	+ 18	15	14	- 13	HNE	6	o	3	0	23	-	-	-
Bodo	29.78	20	E	6	b	29.80	+ 2	19	18	+ 4	E	1	b	23	12	-	-	-	-
Christiansund	29.56	26	E	2	b	29.65	+ 16	21	25	+ 3	ESE	1	b	25	23	-	-	-	-
Skudnesnaes	29.63	36	Z	0	c	29.59	+ 35	33	29	- 2	ESE	0	2	o	37	32	-	-	-
BRITISH ISLANDS.																			
Sumburgh Head	29.40	37	NE	1	c	29.59	+ 19	38	35	+ 3	ESE	3	o	5	10	12	35	-	0.01
Stornoway	29.30	40	ESE	1	c	29.60	+ 53	40	38	+ 2	ESE	3	o	5	10	12	35	-	0.01
Malin Head	29.22	42	S	2	b	29.60	+ 74	42	41	+ 2	E	4	o	3	10	12	35	-	0.05
Blackod Pt.	29.07	47	S	5	c	29.48	+ 98	45	44	+ 1	ESE	7	o	0	10	12	35	-	0.60
Valencia	29.99	49	ESE	6	c	29.78	+ 74	49	46	+ 6	SW	7	o	7	37	37	-	-	0.40
GERMANY, &c.																			
Roche's Point	29.16	47	S	5	c	29.88	+ 67	41	40	+ 0	HSE	6	o	7	51	40	-	-	0.48
Parsonstown	29.20	45	SE	1	c	29.75	+ 74	43	41	+ 3	SW	1	o	7	51	39	-	-	0.12
Donaghadee	29.31	45	SE	2	c	29.77	+ 67	46	46	+ 0	S	3	o	3	50	47	-	-	0.23
Liverpool Obsy.	29.40	42	SE	2	b	29.90	+ 58	42	42	+ 0	SE	2	o	3	50	47	-	-	0.12
Holyhead	29.36	44	SE	3	b	29.87	+ 55	44	44	+ 1	SE	3	o	3	50	47	-	-	0.12
Pembroke (St. Ann's)	29.40	46	SE	5	c	29.87	+ 55	46	46	+ 1	SE	5	o	3	50	47	-	-	0.12
FRANCE.																			
Scilly (St. Mary's)	29.35	39	S	5	on	29.07	+ 51	47	46	+ 0	HSE	6	o	7	51	40	-	-	0.20
Jersey (St. Aubin)	29.60	45	SE	3	b	29.79	+ 39	47	47	+ 0	HSE	3	o	7	51	40	-	-	0.13
Portland Bill	29.51	45	SE	3	b	29.72	+ 43	45	45	+ 2	SW	3	o	7	51	40	-	-	0.28
Dungeness	29.48	44	SE	2	o	29.20	+ 40	44	43	+ 0	S	6	o	7	51	40	-	-	0.26
SPAIN, &c.																			
Wick	29.42	41	H	2	b	29.12	+ 37	40	38	+ 2	SE	7	o	4	45	26	-	-	-
Nairn	29.37	35	E	1	b	29.00	+ 37	36	34	+ 2	ESE	4	o	4	45	26	-	-	-
Aberdeen	29.42	36	ESE	1	b	29.14	+ 35	36	37	+ 1	ESE	4	o	4	45	26	-	-	-
Leith	29.38	35	ESE	1	o	29.06	+ 33	34	34	+ 0	E	7	o	4	45	26	-	-	-
North Shields	29.41	40	E	2	o	29.04	+ 46	41	40	+ 5	ESE	3	o	4	45	26	-	-	0.06
GERMANY, &c.																			
Spurn Head	29.41	41	SE	4	m	29.10	+ 31	41	40	+ 2	SE	7	o	4	45	26	-	-	-
Yarmouth	29.45	43	E	3	o	29.28	+ 33	41	41	+ 1	ESE	4	o	4	45	26	-	-	-
Loughborough	29.43	46	E	1	o	29.02	+ 51	44	43	+ 2	ESE	2	o	4	45	26	-	-	-
Oxford	29.45	41	SE	2	b	29.06	+ 51	45	44	+ 5	SE	3	o	4	45	26	-	-	-
London (Brixton)	29.47	41	SE	2	o	29.12	+ 45	45	45	+ 5	HSE	3	o	4	45	26	-	-	0.16
FRANCE.																			
The Scaw (Skagen)	29.52	39	E	6	S	29.67	+ 41	25	25	+ 0	E	2	o	2	34	15	-	-	0.20
Fano	29.53	33	SE	2	b	29.34	+ 19	33	32	+ 1	E	1	o	2	34	15	-	-	-
Cuxhaven	29.57	37	SE	1	o	29.49	+ 01	37	36	+ 1	S	1	o	2	34	15	-	-	0.12
The Helder	29.51	34	SE	1	c	29.41	+ 17	34	34	+ 0	ESE	1	o	2	34	15	-	-	-
Brussels	29.47	38	SE	1	c	29.47	+ 21	38	38	+ 1	ESE	2	o	2	34	15	-	-	0.16
Berlin	29.67	38	SE	1	o	29.56	+ 24	38	38	+ 2	SE	2	o	2	34	15	-	-	0.08
Frankfurt	29.63	41	SE	2	c	29.63	+ 12	41	41	+ 1	HSE	2	o	2	34	15	-	-	0.31
Munich	29.74	37	SE	1	c	29.74	+ 11	40	37	+ 3	HSE	2	o	2	34	15	-	-	-
FRANCE.																			
C. Gris Nez	29.53	42	SE	1	f	29.34	+ 30	42	41	+ 0	S	5	o	2	34	15	-	-	0.24
Brest	29.58	49	SE	3	o	29.25	+ 42	48	46	+ 3	HSE	5	o	2	34	15	-	-	-
Lorient	29.66	49	SE	3	c	29.34	+ 36	47	46	+ 2	HSE	6	o	2	34	15	-	-	0.51
Rochefort	29.82	47	SE	3	b	29.57	+ 16	47	46	+ 3	HSE	5	o	2	34	15	-	-	-
Biarritz	29.91	51	SE	4	c	29.71	+ 14	46	46	+ 3	S	4	o	2	34	15	-	-	-
FRANCE.																			
Paris	29.58	43	SE	3	o	29.53	+ 21	43	41	+ 1	E	3	o	2	34	15	-	-	0.47
Belfort	29.69	43	SE	6	c	29.73	+ 11	46	45	+ 2	ESE	2	o	2	34	15	-	-	0.04
Lyons	29.87	48	S	2	c	29.78	+ 14	45	42	+ 2	S	2	o	2	34	15	-	-	0.04
Nice	29.95	46	S	1	o	29.88	+ 11	46	42	+ 5	Z	0	o	3	55	41	-	-	-
Perpignan	29.89	50	Z	0	c	29.78	+ 11	46	43	+ 3	HSE	2	o	2	34	15	-	-	-
SPAIN, &c.																			
Corunna	30.09	52	SE	2	o	30.02	+ 02	56	56	+ 4	SE	5	o	2	34	15	-	-	0.47
Lisbon	30.10	61	SE	5	o	30.04	+ 13	62	60	+ 3	SE	5	o	2	34	15	-	-	-
Azores (P. Delgada)																			

NOTE: The Sunshine for London given in this Table is recorded on the Tower of the Wesleyan Training College, Westminster.
† Observations received too late for insertion in Charts on next page.

STATIONS.	YESTERDAY EVENING. (See note on last page.)					THIS MORNING. (See note on last page.)					PAST 24 HOURS								
	Barom.	Temp.	Wind.	Force	Weather	Barometer.	Temperature.	Wind.	Force	Weather.	Temp.	Temp.	Temp.	Sunshine.	Rainfall.				
	At 32° and M.S.L.	Dry Bulb.	Dirac.	Force (in lbs)		At 32° and M.S.L.	Change since Yesterday.	Dry Bulb.	Wet Bulb.	Change since Yesterday.	Dirac.	Force (in lbs)	Wet Bulb.	Weather.	Max.	Min.	Hours.	Ins.	
SCANDINAVIA.																			
Haparanda	29.87	2	O	10	b	30.06	+ 31	23	2	r	2	m	10	24	-	-	-	-	-
Hernösand	29.83	Z	o	b	30.03	+ 43	8	19	19	2	o	D	o	10	19	8	-	-	-
Stockholm	29.66	19	n	4	o	28.84	+ 15	ILL	13	ANE	2	o	o	36	23	-	-	-	-
Wisby	29.57	27	ne	S	29.75	+ 28	27	27	19	WITE	H	o	o	36	23	-	-	-	0.12
Karlstad	29.94	18	F	2	to	29.91	+ 50	8	19	IT	S	o	o	36	23	-	-	-	-
Färder (Ålana Fjord)	29.63	244	ME	6	o	29.82	+ 18	15	14	- 13	HE	6	o	3	0	23	-	-	-
Bodo	29.78	20	G.	4	b	29.84	+ 19	18	18	+ 4	E	1	b	23	12	-	-	-	-
Christiansund	29.56	26	2	b	29.65	+ 27	25	3	ESE	o	2	o	37	32	-	-	-	-	-
Skudnesnaes	29.63	36	2	D	o	29.59	+ 33	33	29	- 2	ESE	o	2						

What is computer vision?

- Overview
- How It Works
 - Demo
- Common Uses
 - Summarize large documents with gen AI
 - Image-based product search for ecommerce
 - Build an image processing pipeline
 - Get automated image descriptions with gen AI
 - Stream-process videos
 - Extract text and insights from documents with generative AI
 - High-precision visual inspection
- Pricing

Document understanding made easy with generative AI—process all types of documents in one place with speed and higher accuracy. [➔](#)

What is computer vision?

Extract insights from images, documents, and videos

Access advanced vision models via APIs to automate vision tasks, streamline analysis, and unlock actionable insights. Or build custom apps with no-code model training and low cost in a managed environment.

[Try Vision AI](#) [Request a demo](#)

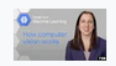
OVERVIEW

Computer vision defined

Computer vision is a field of artificial intelligence (AI) that enables computers and systems to interpret and analyze visual data and derive meaningful information from digital images, videos, and other visual inputs. Some of its typical real-world applications include: object detection, visual content (images, documents, videos) processing, understanding and analysis, product search, image classification and search, and content moderation.

Highlights

- What are Google Cloud's computer vision offerings?
- Which computer vision offering is right for me?
- OCR with generative AI



How computer vision works
7-min video

[What is computer vision?](#)[Overview](#)[How It Works](#)[Demo](#)[Common Uses](#)

Summarize large documents with gen AI

Image-based product search for ecommerce

Build an image processing pipeline

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Access advanced vision models via APIs to unlock actionable insights. Or build custom solutions in a managed environment.

[Try Vision AI](#)[Request a demo](#)

OVERVIEW

Computer vision defined

```
#!/usr/bin/env python
# Run Google OCR on the Farragut sample image

import pickle

from google.cloud import vision
from google.cloud.vision import types
from google.protobuf import json_format

# Load the jpeg
with open("../samples/Farragut-DD-348-1942-01-0021.jpg", 'rb') as jf:
    ie=jf.read()

# Analyze the document
image = types.Image(content=ie)
client = vision.ImageAnnotatorClient()
response = client.document_text_detection(image=image)
document = response.full_text_annotation

# Save the resulting JSON
pickle.dump(document, open( "detection.pkl", "wb" ) )
with open('detection.txt', 'w') as file:
    file.write(json_format.MessageToJson(document))
```

LOG OF THE UNITED STATES SHIP **FARRAGUT** (348) (Identification Number)

AT **Hawaiian Area** TO **Thursday 8 January 1942**
(Day) (Date) (Month)

ZONE DESCRIPTION **Plus 10 1/2** **G.P. HUNTER, Commander.** U. S. Navy, Commanding.

Table with columns: Hour, BY REVS., BY LOG, COURSE (P. C.), WIND, BAROMETER, TEMPERATURE, CLOUDS, SEA. Rows 1-12.

Latitude/Longitude, Current, GYROCOMPASS IN USE, STANDARD MAG. COMPASS, MAGAZINE TEMPERATURES.

DRILLS AND EXERCISES. Morning/Afternoon. Division 1-9.

P.M. 13-24. Table with columns: Hour, BY REVS., BY LOG, COURSE, WIND, BAROMETER, TEMPERATURE, CLOUDS, SEA.

SUBMERGED RUN DATA—SUBMARINES. Run No. (Serial), Time to submerge, Greatest depth.

LOG OF THE UNITED STATES SHIP **FARRAGUT** (348) (Identification Number)

AT **Hawaiian Area** TO **Thursday 8 January 1942**
(Day) (Date) (Month)

ZONE DESCRIPTION **Plus 10 1/2** **HUNTER, Commander.** U. S. Navy, Commanding.

Table with columns: Hour, BY REVS., BY LOG, COURSE (P. C.), WIND, BAROMETER, TEMPERATURE, CLOUDS, SEA. Rows 1-12.

Latitude/Longitude, Current, GYROCOMPASS IN USE, STANDARD MAG. COMPASS, MAGAZINE TEMPERATURES.

DRILLS AND EXERCISES. Morning/Afternoon. Division 1-9.

P.M. 13-24. Table with columns: Hour, BY REVS., BY LOG, COURSE, WIND, BAROMETER, TEMPERATURE, CLOUDS, SEA.

SUBMERGED RUN DATA—SUBMARINES. Run No. (Serial), Time to submerge, Greatest depth.



How can I help you today?

Compare design principles
for mobile apps and desktop software

Suggest fun activities
for a family visiting San Francisco

Explain why popcorn pops
to a kid who loves watching it in the microwave

Recommend a dish
to bring to a potluck

 | Message ChatGPT... 



You

I need to transcribe some historical weather records from a photo of an old document. Can you do that?



ChatGPT

Yes, I can help you with that. Please upload the photo of the historical weather records, and I will transcribe the contents for you.



Message ChatGPT...



You

N. Nov. 48
 (Over 1900)

16

LOG OF THE UNITED STATES SHIP FARRAGUT (548) (Ship's Name) (Hull Number)

FROM Honolulu area TO Thursday 8 January 1942

DATE OF DEPARTURE Thursday 8 January 1942

OFFICER IN CHARGE G. F. HUNTER, Commanding U. S. Navy, Commanding

Hour	WIND				BAROMETER				TEMPERATURE				CLOUDS				SEA		
	Dir	Force	Temp	State	Reduction	Obs	Cor	Reduction	Obs	Cor	Surf	Atmos	Windspeed	Dir	Force	Height	Dir	Force	
1	111.5	11	9			220	SW	4	2992	75	74	74	c	cu	SW	7	15	2	SW
2	100.5	10	6			220	SW	3	2991	75	72	74	b	cu	SW	1	15	2	SW
3	92.5	10	5			220	SW	4	2991	75	73	74	b	-	-	-	20	2	SW
4	98.5	10	4			220	SW	4	2992	75	75	74	b	-	-	-	20	2	SW
5	97.5	10	3			220	W	4	2992	75	75	74	b	sc	SW	2	25	2	SW
6	100.5	10	2			220	SW	4	2995	75	73	74	b	cu	SW	2	25	2	SW
7	165.5	17	7			040	SW	3	2994	75	75	74	b	cu	SW	5	50	2	SW
8	150.5	15	6			040	SW	3	2996	75	74	74	b	sc	SW	5	50	2	SW
9	142.5	15	7			040	W	4	2998	75	74	74	b	sc	W	2	50	2	W
10	147.5	15	5			040	W	4	2997	75	75	74	b	cu	W	2	50	2	W
11	120.5	15	6			040	W	4	2996	74	74	74	b	sc	W	4	40	2	W
12	142.5	15	7			040	W	4	2997	75	74	74	b	cu	W	5	50	2	W

Latitude 22 17 15 N
 Longitude 158 05 00 W

Latitude 22 58 56 N
 Longitude 157 59 00 W

Latitude 23 12 00 N
 Longitude 158 37 00 W

Current
 Set 150
 Drift 1 kt.

Gyrocompass in Use
 Error

STANDARD MAG. COMPASS
 Compass No. 213
 S. H. 029
 Error 11 M
 Variation 11-30 E
 Deviation 50 W

Received 0
 Expended 2899
 On hand 6708

Distilled 4210
 Received 0
 Expended 4255
 On hand 7452

BEFORE LEAVING PORT
 Draft for'd
 Draft aft

AFTER ENTERING PORT
 Draft for'd
 Draft aft

MAGAZINE TEMPERATURES:
 Maximum 79
 Minimum 75
 Conditions NORMAL.

Hour	W	Force	Temp	State	Reduction	Obs	Cor	Reduction	Obs	Cor	Surf	Atmos	Windspeed	Dir	Force	Height	Dir	Force	
13	151.5	15	9			040	W	6	2994	75	72	74	b	cu	W	5	50	5	W
14	142.5	15	7			040	W	6	2990	75	73	74	b	cu	W	1	50	4	W
15	125.5	12	9			055	W	5	2990	75	73	74	b	-	-	-	50	3	W
16	108.5	12	6			055	W	2	2991	74	71	74	m	sc	W	7	50	3	W
17	114.5	11	6			055	W	6	2991	73	71	74	m	sc	W	6	55	5	W
18	125.5	7	4			210	W	6	2992	72	70	74	0-4	cu	W	2	60	5	W
19	106.5	6	6			210	W	6	2994	72	69	74	b	sc	W	5	15	5	W
20	122.5	7	5			210	W	6	2994	72	69	74	b	sc	W	5	10	5	W
21	127.5	6	7			210	W	5	2996	72	68	74	b	cu	W	4	5	5	W
22	122.5	5	7			245	W	5	2996	71	68	74	b	cu	W	2	5	5	W
23	05.5	6	5			245	W	4	2998	70	66	74	b	cu	W	2	5	5	W
24	170.5	7	2			245	W	4	2996	70	66	74	b	sc	W	4	15	2	W

SEMIKNOT RUN DATA—SCHEDULED

Run No. (Serial)	1	2	3	4	5
Time to submerge					
Greatest depth					

(Original (ribbon) copy of this page to be sent to Bureau of Navigation monthly) 4-5425 U. S. GOVERNMENT PRINTING OFFICE

Here's the photo. What do you make of it.

Message ChatGPT...



ChatGPT

The document is a log page from the United States Ship Farragut (348), dated Thursday, 8 January 1942, during its passage in the Hawaiian area. The log includes detailed recordings of weather conditions, including wind, barometer readings, temperature, clouds, and sea conditions, recorded hourly from 4 A.M. to 4 P.M. It also contains details on the ship's course, speed, and position at various times.

The left section of the document contains navigation details such as latitude and longitude at different times, as well as information about the ship's draft before and after entering a port and data related to the ship's magnetic compass.

The right section of the document includes DRILLS AND EXERCISES, with records for morning and afternoon sessions, and data on fuel and water (distilled) received, expended, and on hand.

At the bottom, there's a section labeled "SUBMERGED RUN DATA—SUBMARINES" with fields for Run No. (Serial), Time to submerge, and Greatest depth, though this part appears to be blank.

This document is a typical naval logbook page from the World War II era, detailing daily operational conditions and the ship's performance.

I will now proceed to transcribe the key details from this historical weather record.

LOG OF THE UNITED STATES SHIP FARRAGUT (348)

- Date: Thursday 8 January 1942
- Area: Hawaiian area
- Commander: G.F. HUNGER, U.S. Navy, Commanding

WEATHER RECORDINGS (4 A.M. to 4 P.M.)

- Wind: SW direction for all entries, varying intensity from 3 to 6 knots.
- Barometer: Ranges from 2992 to 2996 at different times.
- Temperature: Air temperature fluctuates between 75 and 76 degrees Fahrenheit, with sea temperature constant at 74 degrees Fahrenheit.
- Clouds: Predominantly bc (Broken Clouds) and cu (Cumulus) with occasional ciu (Cirrocumulus) and a few instances of stcu (Stratocumulus).
- Sea: SW swell, varying force from 1 to 5.

NAVIGATIONAL DETAILS

- Latitude and Longitude recorded at different times, indicating the ship's movement.
- Compass Error: H.O. No. 2139; Variation 11°-30'E; Deviation 2°W.

DRILLS AND EXERCISES

- Received and expended fuel and water statistics.
- Division drills conducted in the morning and afternoon.

SUBMERGED RUN DATA — SUBMARINES

- No entries for this date.

(Note: This transcription focuses on the key details provided in the visible sections of the document.)

If you need more detailed transcription of any specific section, please let me know!



ChatGPT

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You

Where is the ship?



ChatGPT

Based on the log, the positions of the United States Ship Farragut on Thursday, 8 January 1942, can be identified by the latitude and longitude entries provided:

1. Morning position (assumed at the start of the log):
 - Latitude: 22° 17' 15" N
 - Longitude: 158° 25' 00" W
2. Noon position:
 - Latitude: 22° 58' 30" N
 - Longitude: 157° 30' 00" W
3. Afternoon position (presumably towards the end of the log):
 - Latitude: 23° 12' 00" N
 - Longitude: 156° 57' 00" W

These coordinates suggest that the ship was operating in the Pacific Ocean, specifically in the vicinity of the Hawaiian Islands, moving in a general northwesterly direction based on the change in latitude and longitude from morning to afternoon.



If you need more detailed transcription of any specific section, please let me know!



You

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ChatGPT

Based on the log, the positions of the United States Ship Farragut on Thursday, 8 January 1942, can be identified by the latitude and longitude entries provided:

- Morning position (assumed at the start of the log):
 - Latitude: 22° 17' 15" N **Correct**
 - Longitude: 158° 25' 00" W **158 05**
- Noon position:
 - Latitude: 22° 58' 30" N **Correct**
 - Longitude: 157° 30' 00" W **157 39**
- Afternoon position (presumably towards the end of the log):
 - Latitude: 23° 12' 00" N **Correct**
 - Longitude: 156° 57' 00" W **156 27**

These coordinates suggest that the ship was operating in the Pacific Ocean, specifically in the vicinity of the Hawaiian Islands, moving in a general northwesterly direction based on the change in latitude and longitude from morning to afternoon.





You

Give me a table of all the observed pressures



ChatGPT

Sure, here is the table listing all the observed barometric pressures from the log of the United States Ship Farragut on Thursday, 8 January 1942:

Time (A.M.)	Barometer (inHg)
4:00	29.92
5:00	29.91
6:00	29.92
7:00	29.92
8:00	29.92
9:00	29.96
10:00	29.97
11:00	29.99
12:00	30.00
Time (P.M.)	Barometer (inHg)
1:00	29.94
2:00	29.90
3:00	29.91
4:00	29.92

This table covers the 12-hour span from 4 A ↓ o 4 P.M. as logged.



You

Give me a table of all the observed pressures



ChatGPT

Sure, here is the table listing all the observed barometric pressures from the log of the United States Ship Farragut on Thursday, 8 January 1942:

Time (A.M.)	Barometer (inHg)
4:00	29.92
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6:00	29.92
7:00	29.92
8:00	29.92
9:00	29.96
10:00	29.97
11:00	29.99
12:00	30.00
Time (P.M.)	Barometer (inHg)
1:00	29.94
2:00	29.90
3:00	29.91
4:00	29.92

This table covers the 12-hour span from 4 A ↓ o 4 P.M. as logged.

Using Tech Giants for Data Rescue?

It does cost \$, but not much (typically \$15/1000 pages).

They're *so close!*

But error rates still too high to use naively.
And beware of hallucinated numbers.

Do try – there's real power there already.

Try everything: Textract, Google vision, ChatGPT, Claud, Gemini, ... Some have custom training options.

Should we be building our own deep learning models?