

AI Clauset!!

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Why do we need it?



- Considering the current weather conditions, where the temperature varies for more than 10 C everyday.
- We all are tired of checking the weather and deciding what to wear every morning, then going through the decision fatigue early in the morning to decide what to wear as per the weather.

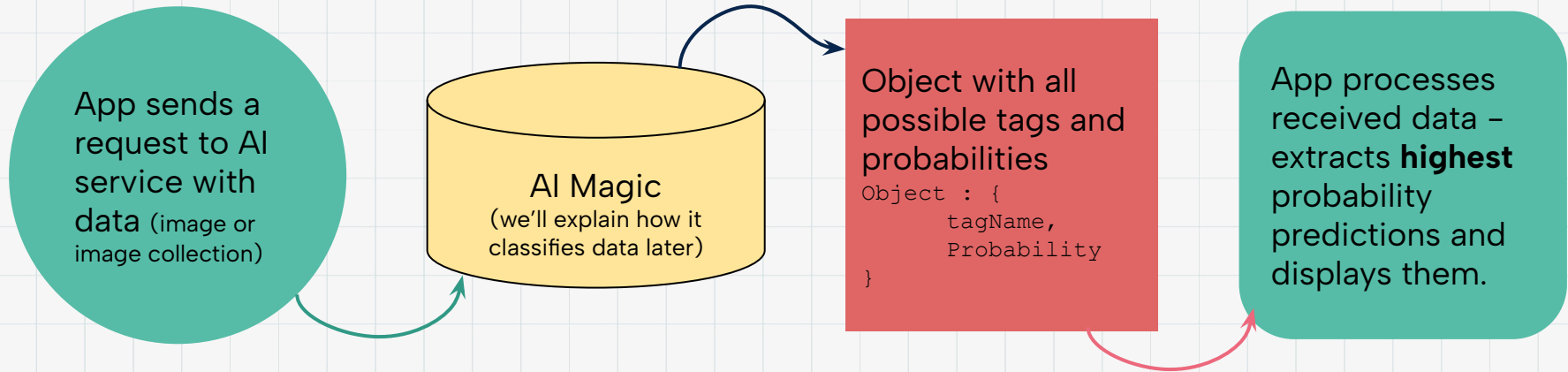
AI + Clothes =

What it does??

- Allow a user to create a virtual closet by uploading images.
- Lets a user set their current location.
- As per the location and the wardrobe, it suggests outfits depending on the weather for that location that day.



App to AI Connection Diagram



How does it work?

Though simple API Requests! 

```
const image = request.body;  
let upper_lower_prediction = await fetch("https://clothrecog-prediction.cognitiveservices.azure.com/customvision/v3.0/Prediction/335d/classify/iterations/predict%20upper%20or%20lower/image", {  
  'method': 'POST',  
  'Prediction-Key': '5f0f9fcd5fe44a9993a61e553aef68de',  
  'Content-Type': 'application/octet-stream',  
  'body': image  
});
```

```
335d/classify/iterations/predict%20upper%20or%20lower/image", {
```

Example of request for Upper/Lower Tag prediction

```
let color_prediction = await fetch("https://clothrecog-prediction.cognitiveservices.azure.com/customvision/v3.0/Prediction/335d/classify/iterations/predict%20color/image", {  
  'method': 'POST',  
  'Prediction-Key': '5f0f9fcd5fe44a9993a61e553aef68de',  
  'Content-Type': 'application/octet-stream',  
  'body': image  
});
```

```
335d/classify/iterations/predict%20color/image", {
```

Example of request for Color Tag prediction



Demonstration

Azure AI services:



01

Custom Vision

02

Automated ML



+8



01

Custom Vision?

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-5



-4





What is Custom Vision?

Build and train your own image classifiers to recognize specific objects, scenes, or concepts in images.

Different from the general-purpose Computer Vision service, which provides pre-trained models for common computer vision tasks.

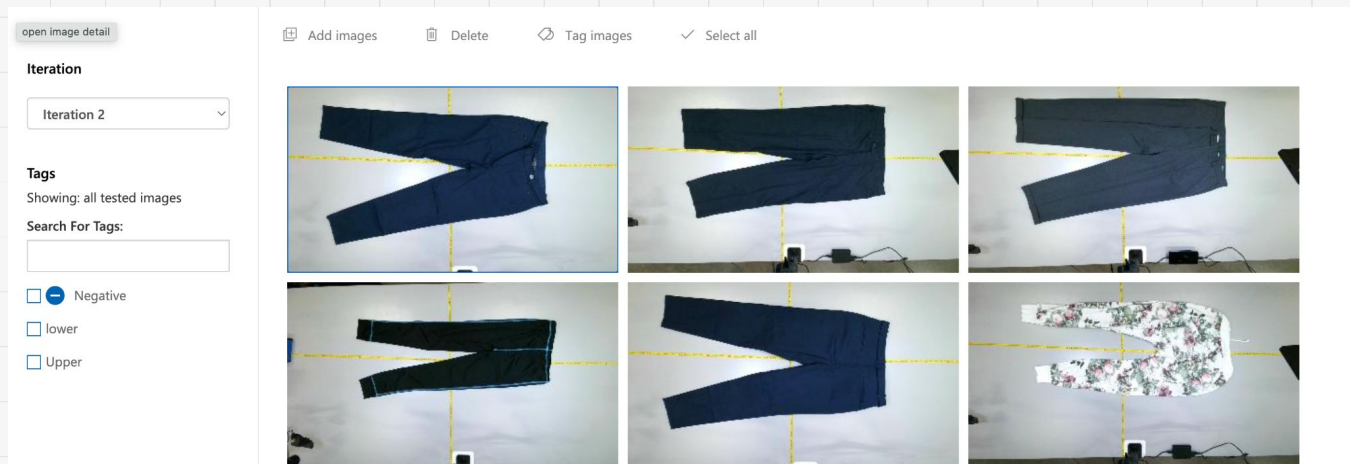
We used to identify various types of clothing items.

-2

+1



1) Start by labelling images

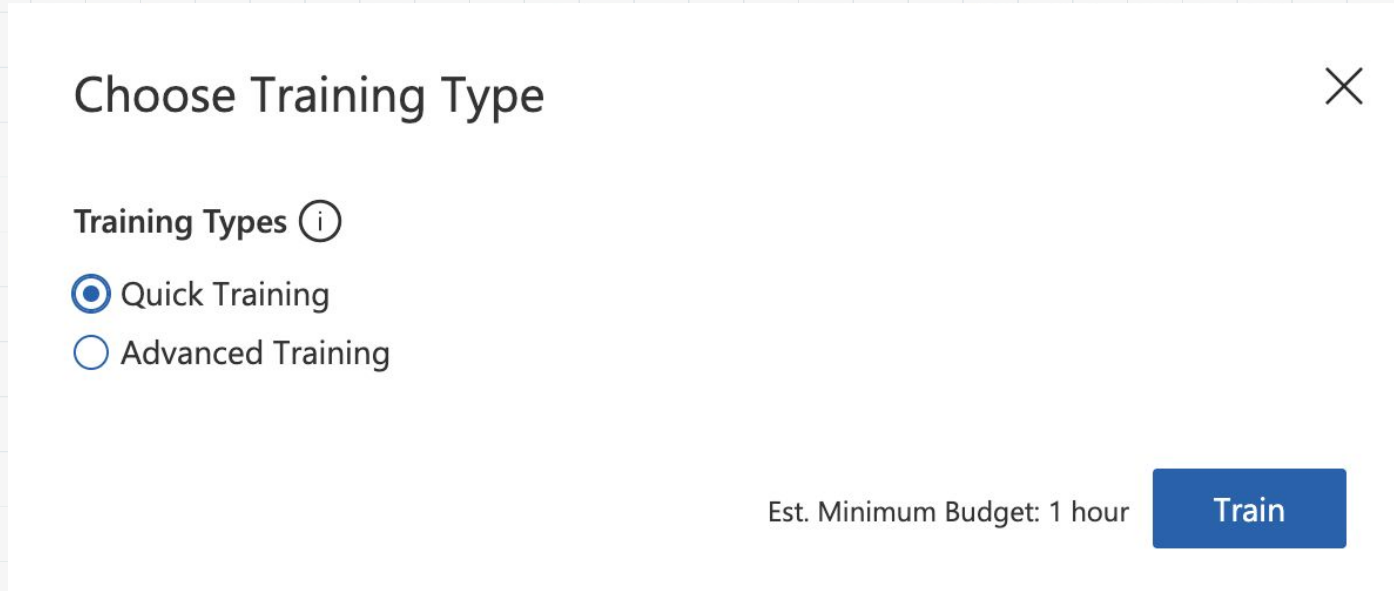


+5

+3



2) Choose the training type



Choose Training Type

Training Types ⓘ

☒ Quick Training

☐ Advanced Training

Est. Minimum Budget: 1 hour

Train

3) Wait for it to finish!

Iteration 2

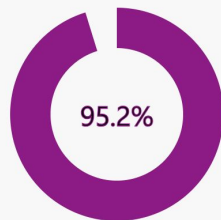
Finished training on **4/8/2024, 12:28:08 PM** using **General [A2]** domain

Iteration id: **12f03a26-e500-4e20-87c2-e5c900d4e29c**

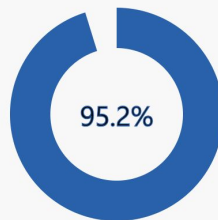
Classification type: **Multilabel (Multiple tags per image)**

Published as: **predict upper or lower**

Precision ⓘ



Recall ⓘ



AP ⓘ



Performance Per Tag

Tag	Precision ^	Recall	A.P.	Image count
lower	100.0%	90.0%	100.0%	50 <div></div>
Upper	91.7%	100.0%	100.0%	54 <div></div>

4) Quick test!

Quick Test




Image URL

→

or

Browse local files

File formats accepted: [jpg](#), [png](#), [bmp](#)
File size should not exceed: [4mb](#)

Using model trained in

Iteration

Iteration 2

Predictions

Tag	Probability
Upper	81.9%
lower	26.6%



02

Automated ML

What is automated ML?

Service that automates the complex and repetitive tasks involved in building and deploying machine learning models:

AutoML can be used to train regression models that predict numerical output values based on input features.

AutoML can also be used to train classification models that predict categorical output values based on input features.

+5



How did we use it?

- Train classification models to suggest clothing items as per the given weather conditions.

Problems we faced?

- It returns the clothing items based on what it has been trained on.
- We want it to return clothing item from a user's virtual wardrobe.



-3



1) Start by filling the basic info.

Submit an Automated ML job PREVIEW

✓ Training method

2 Basic settings

3 Task type & data

4 Task settings

5 Compute

6 Review

Basic settings

Let's start with some basic information about your training job.

Job name * ⓘ

Experiment name *

☐ Select existing ☒ Create new

New experiment name * ⓘ

Description

Tags

:

2) Choose the dataset & the task

Submit an Automated ML job PREVIEW

- ✓ Training method
- ✓ Basic settings
- 3 Task type & data
- 4 Task settings
- 5 Compute
- 6 Review

Task type & data

Choose the type of task that you would like your model to perform and the data to use for training. [Learn more](#)

Select task type * ⓘ

Select task type

- Classification**
To predict one of several categories yes/no, blue, red, green.
- Regression**
To predict continuous numeric values.
- Time series forecasting**
To predict values based on time.
- Natural language processing**
To predict based on text-only data types using multi-class or multi-label classification or named entity recognition.
- Computer vision**
To predict using multi-class or multi-label image classification, object detection, and instance segmentation.

to a supported format.

☒ Show supported data assets only [Reset view](#)

Filter			Columns
Type	Created on ↓	Modified on	
Table	Apr 4, 2024 9:16 PM	Apr 4, 2024 9:...	
Table	Apr 2, 2024 10:57 PM	Apr 2, 2024 10.	
Table	Apr 2, 2024 8:59 PM	Apr 2, 2024 8:...	
< Page 1 of 1 > >>			25/Page ↓

3) Choose the target column that should be returned

- ✓ Training method
- ✓ Basic settings
- ✓ Task type & data
- 4 Task settings
- 5 Compute
- 6 Review

Task settings

Task type

Classification

Data

Sample3_wo_id ([View data](#))

Target column *

Select a target column

clothing_item (String)

clothing_item (String)

temperature (Decimal)

humidity (Decimal)

wind_speed (Decimal)

sunny (Integer)

cloudy (Integer)

rainy (Integer)

snowy (Integer)

layer_required (Boolean)

rain_or_snow (Boolean)

4) Choose the machine

Submit an Automated ML Job PREVIEW

- ✓ Training method
- ✓ Basic settings
- ✓ Task type & data
- ✓ Task settings
- 5 Compute**
- 6 Review

Compute

Select and configure the compute resource for executing your training job.

Select compute type

Serverless

Virtual machine type ⓘ

☒ CPU ☐ GPU

Virtual machine tier ⓘ

☒ Dedicated ☐ Low priority

Virtual machine size

Standard_D2d_v5 (2 core(s), 8GB RAM, 75GB storage, \$0.13/hr)

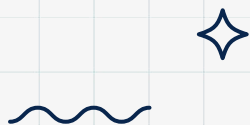
Number of instances

1

Algorithms used!!!

MaxAbsScaler processes the data to get it to a comparable state.

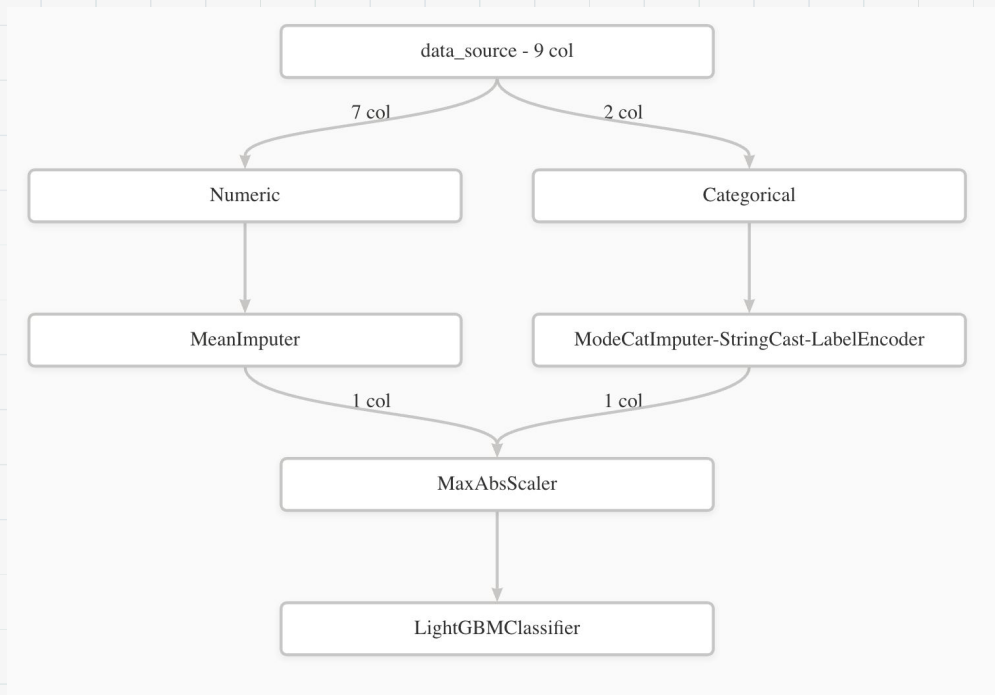
LightGBM classifies the data by creating labels, then uses those labels to classify more data and keeps on updating them.



+5



Data Processing!



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Thank you!

