Aprendizaje automático con AutoML

Gunar Ortiz (@golofaz)

Mobile developer for  Parkin

Organizado por: PyData La Paz

Gunar Ortiz

(@golofaz)

Miembro de GDG AB y PyData La Paz.

CTO en Parkin.

NodeJs developer, UX designer

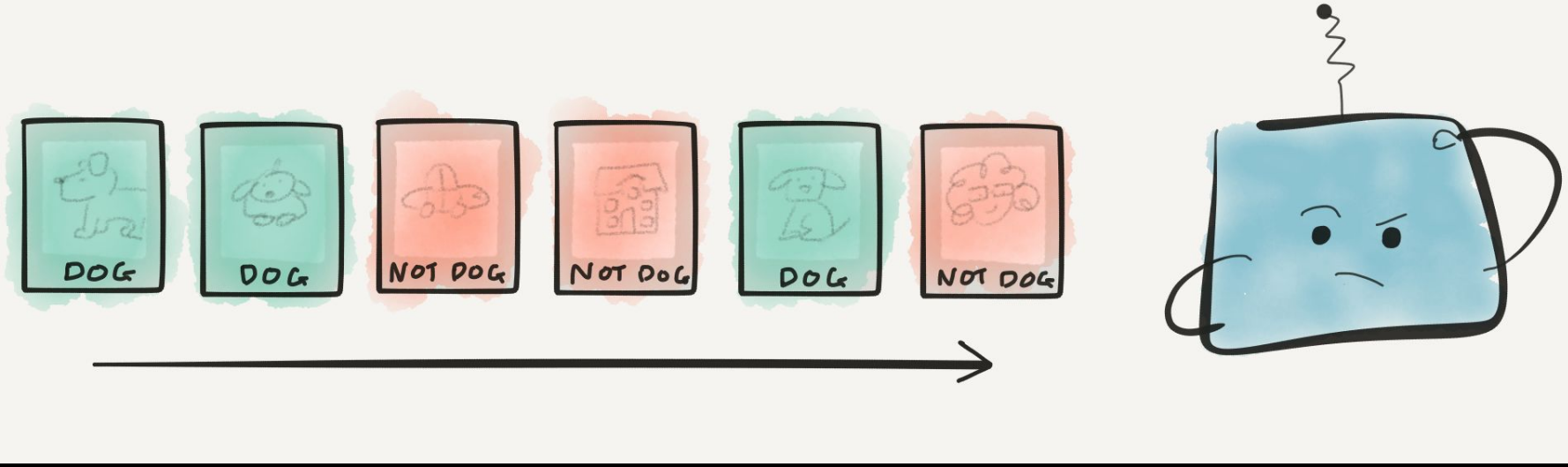
GDG

Cloud AutoML

Google

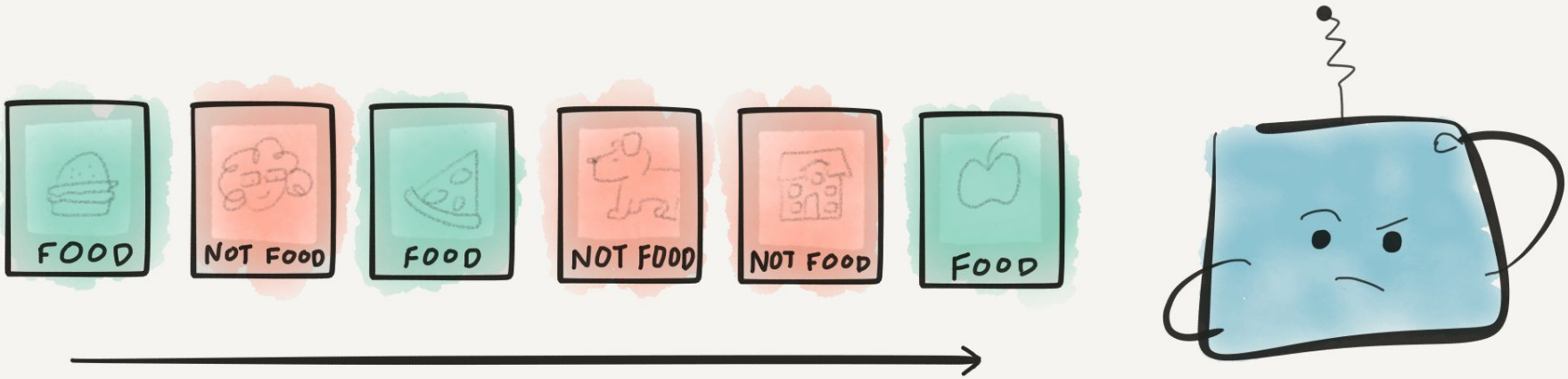

H 25
H 30
H 29
M 32
H 31
H 33
Francisco
Backpack
Person
Person
Person
Person
Cellphone

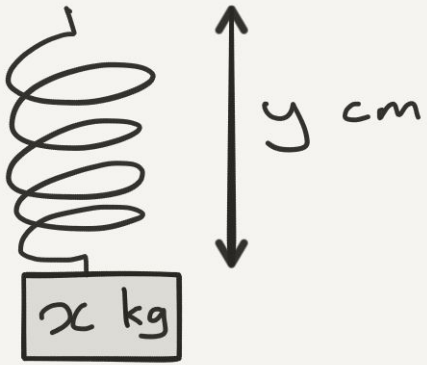

1. UPLOAD YOUR DATA
2. CREATE A DATASET
3. CREATE SIMPLE MODELS


DOG
DOG
NOT DOG
NOT DOG
DOG
NOT DOG

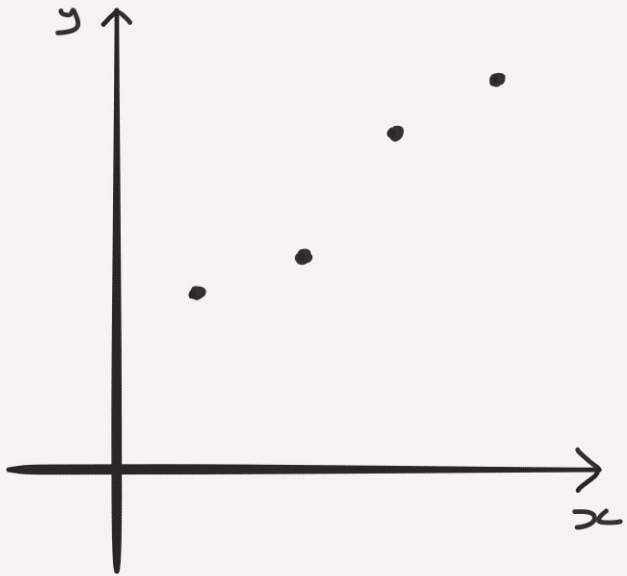
No construimos un sistema que reconozca a los perros.
Construimos un sistema que puede aprender a reconocer a los perros.

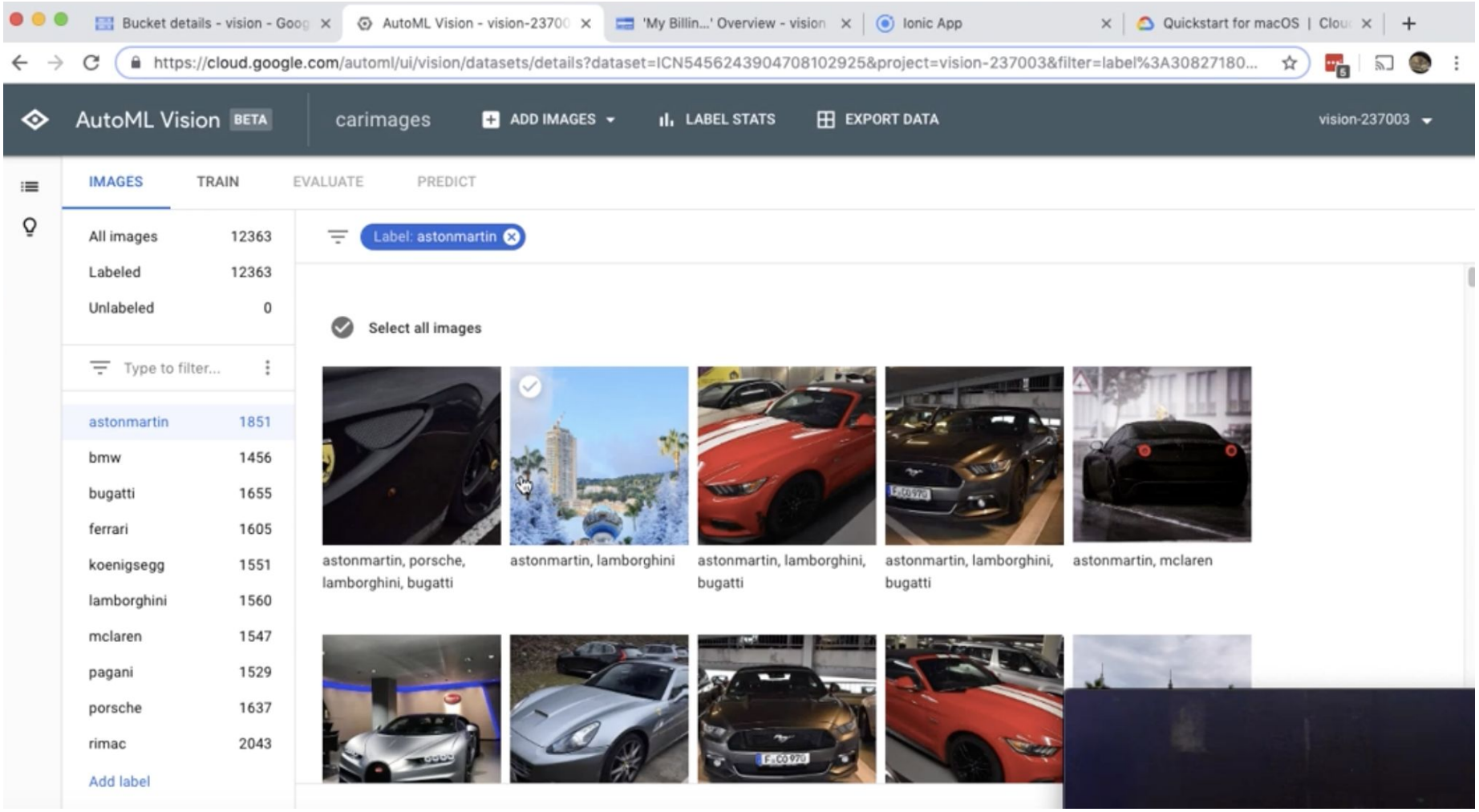

SEEFOOD FOUNDER LAUNCHES
"NOT HOT DOG" APP

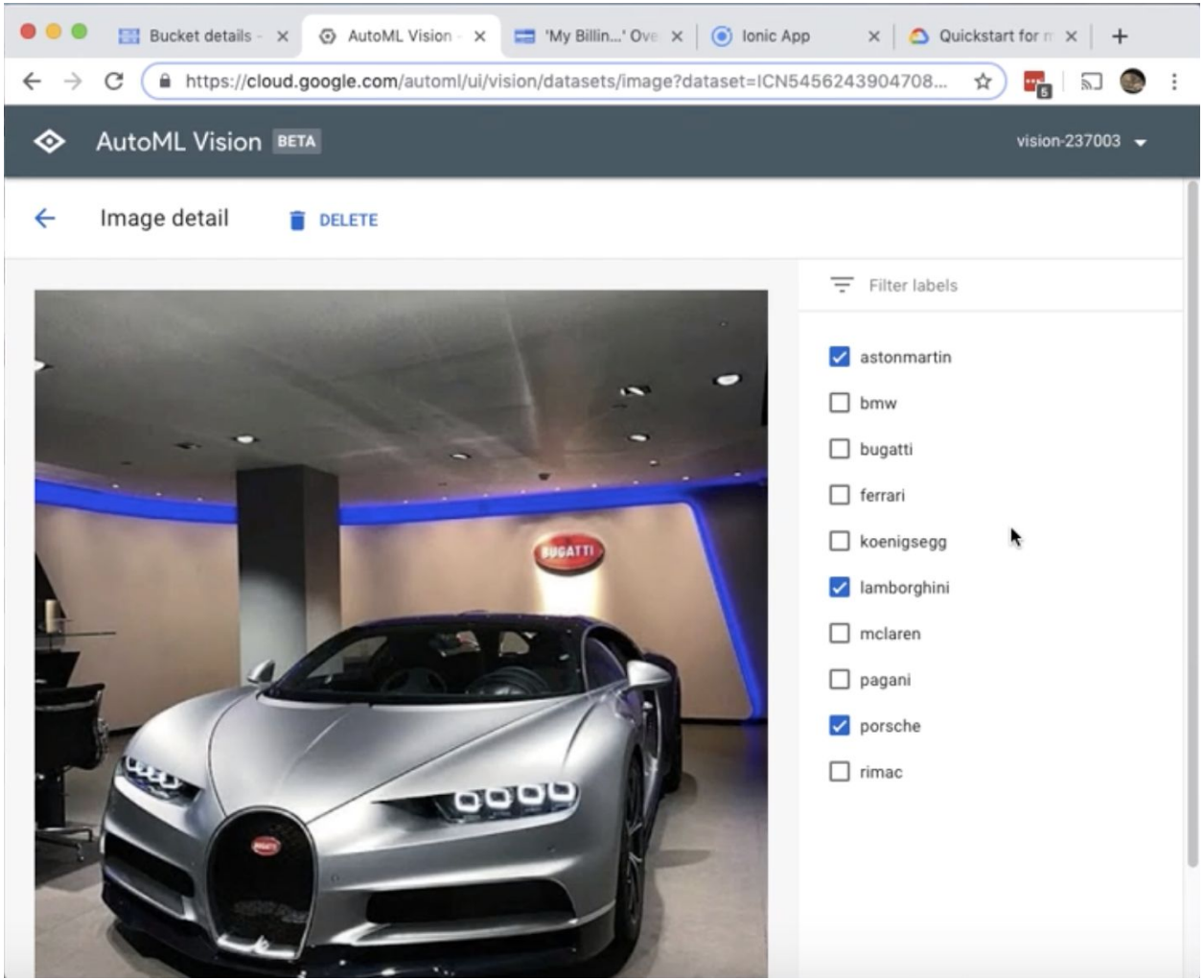

FOOD
NOT FOOD
FOOD
NOT FOOD
NOT FOOD
FOOD



x	y
1	52
2	69
3	94
4	109




Bucket details - vision - Goog
AutoML Vision - vision-23700
'My Billin...' Overview - vision
Ionic App
Quickstart for macOS | Clou
https://cloud.google.com/automl/ui/vision/datasets/details?dataset=ICN5456243904708102925&project=vision-237003&filter=label%3A30827180...
AutoML Vision BETA
carimages
ADD IMAGES
LABEL STATS
EXPORT DATA
vision-237003
IMAGES
TRAIN
EVALUATE
PREDICT
All images 12363
Labeled 12363
Unlabeled 0
Type to filter...
astonmartin 1851
bmw 1456
bugatti 1655
ferrari 1605
koenigsegg 1551
lamborghini 1560
mclaren 1547
pagani 1529
porsche 1637
rimac 2043
Add label
Label: astonmartin
Select all images
astonmartin, porsche, lamborghini, bugatti
astonmartin, lamborghini
astonmartin, lamborghini, bugatti
astonmartin, lamborghini, bugatti
astonmartin, mclaren


Bucket details
AutoML Vision
'My Billin...' Ove
Ionic App
Quickstart for
https://cloud.google.com/automl/ui/vision/datasets/image?dataset=ICN5456243904708...
AutoML Vision BETA
vision-237003
Image detail
DELETE
Filter labels
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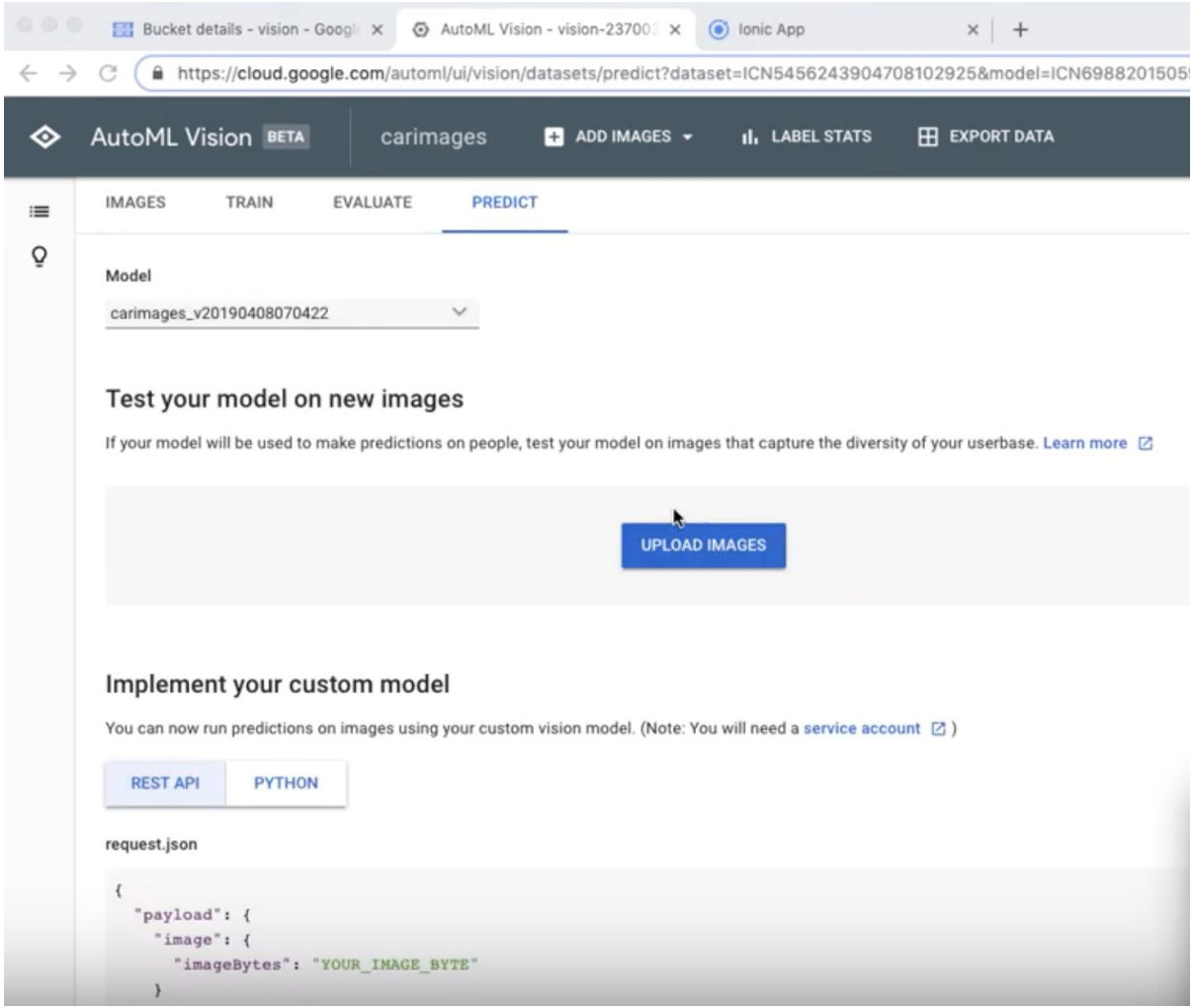
bmw
bugatti
ferrari
koenigsegg
lamborghini
mclaren
pagani
porsche
rimac
BUGATTI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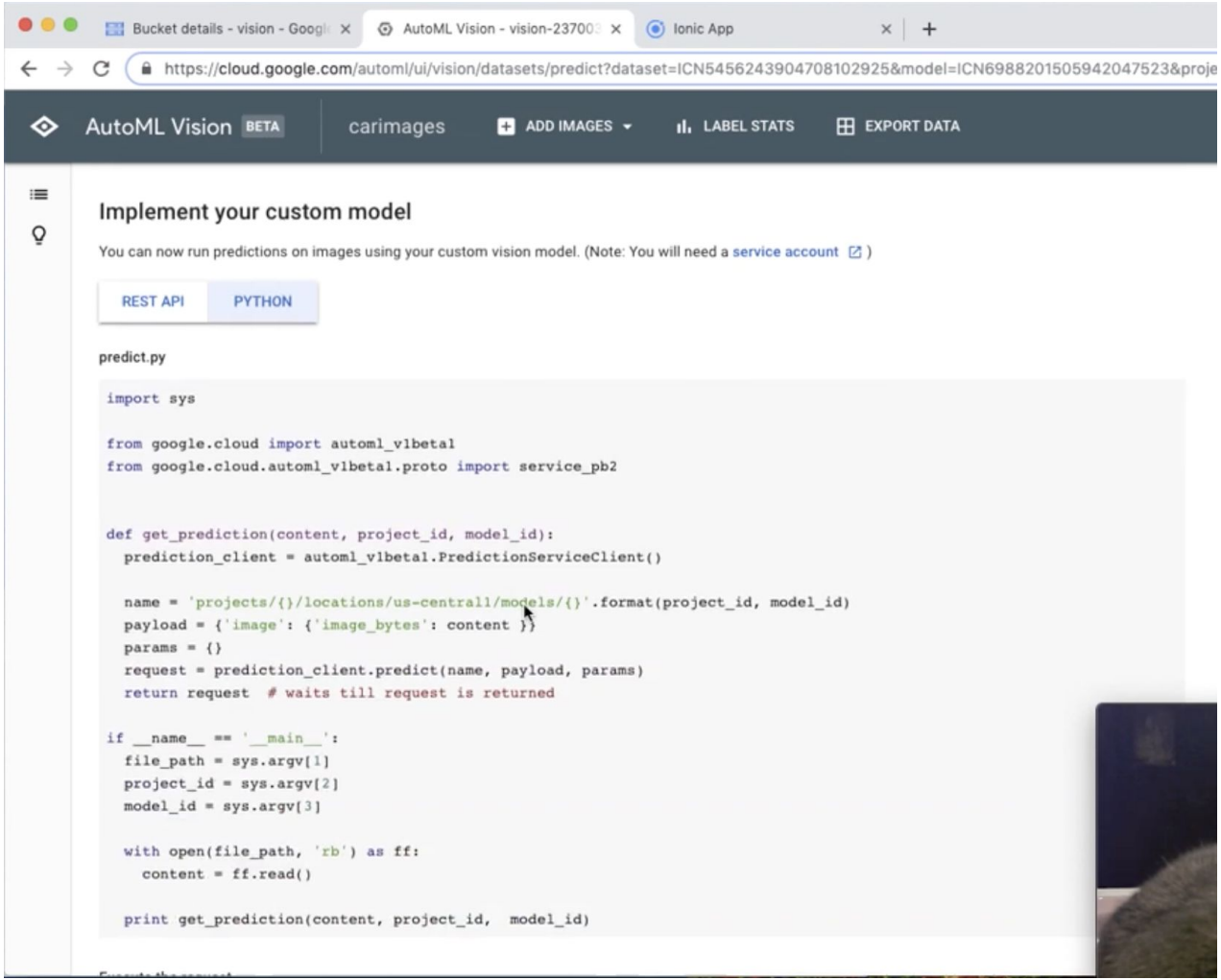
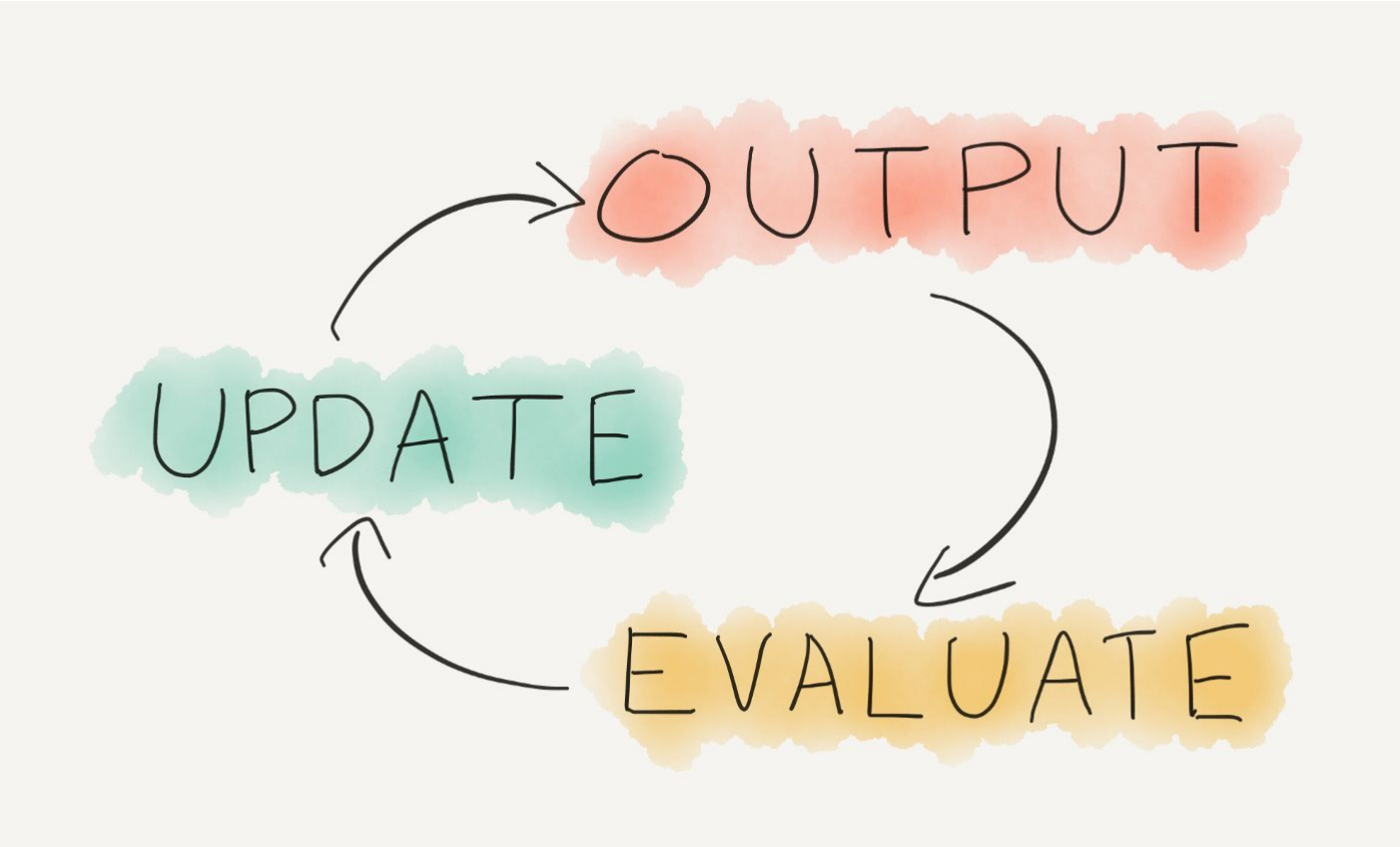
AutoML Vision - vision-237003
Ionic App
https://cloud.google.com/automl/ui/vision/datasets/predict?dataset=ICN5456243904708102925&model=ICN6988201505
AutoML Vision BETA
carimages
ADD IMAGES
LABEL STATS
EXPORT DATA
IMAGES
TRAIN
EVALUATE
PREDICT
Model
carimages_v20190408070422
Test your model on new images
If your model will be used to make predictions on people, test your model on images that capture the diversity of your userbase. Learn more
UPLOAD IMAGES
Implement your custom model
You can now run predictions on images using your custom vision model. (Note: You will need a service account)
REST API
PYTHON
request.json
{
"payload": {
"image": {
"imageBytes": "YOUR_IMAGE_BYTE"
}


Bucket details - vision - Googl
AutoML Vision - vision-237003
Ionic App
https://cloud.google.com/automl/ui/vision/datasets/predict?dataset=ICN5456243904708102925&model=ICN6988201505942047523&proje
AutoML Vision BETA
carimages
ADD IMAGES
LABEL STATS
EXPORT DATA
Implement your custom model
You can now run predictions on images using your custom vision model. (Note: You will need a service account)
REST API
PYTHON
predict.py
import sys
from google.cloud import automl_v1beta1
from google.cloud.automl_v1beta1.proto import service_pb2
def get_prediction(content, project_id, model_id):
prediction_client = automl_v1beta1.PredictionServiceClient()
name = 'projects/{}/locations/us-central1/models/{}'.format(project_id, model_id)
payload = {'image': {'image_bytes': content }}
params = {}
request = prediction_client.predict(name, payload, params)
return request # waits till request is returned
if __name__ == '__main__':
file_path = sys.argv[1]
project_id = sys.argv[2]
model_id = sys.argv[3]
with open(file_path, 'rb') as ff:
content = ff.read()
print get_prediction(content, project_id, model_id)

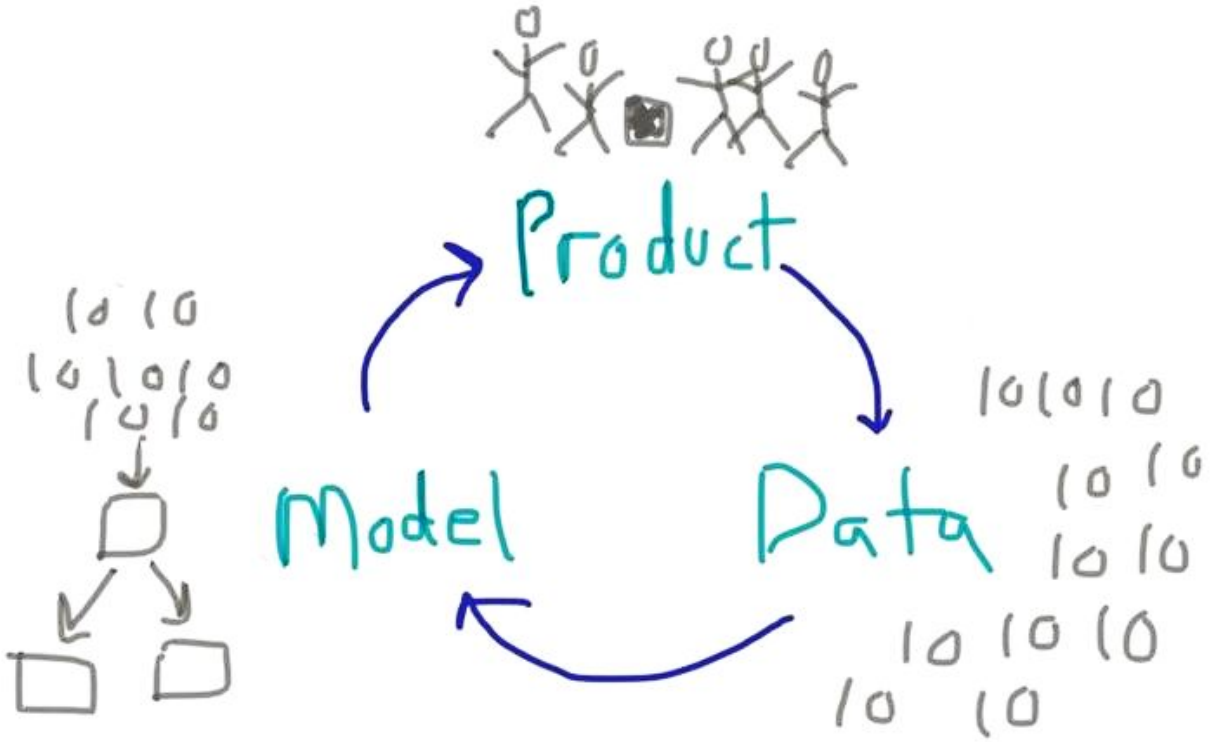

OUTPUT
EVALUATE
UPDATE

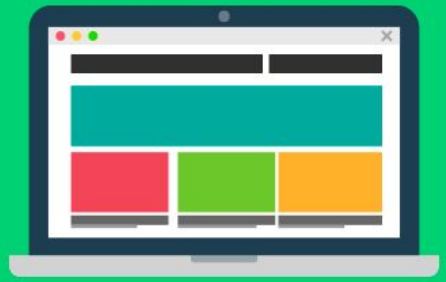
Precios

AutoML Tables Batch Prediction	$1.16 Precio/hour
AutoML Tables Deployment	
AutoML Tables Online Prediction	
AutoML Tables Training	
AutoML Video Classification Batch Predictions	
AutoML Video Classification Model Training	
AutoML Video Object Tracking Batch Predictions	
AutoML Video Object Tracking Model Training	

Precios

AutoML Tables Batch Prediction	$19.32 Precio/hour
AutoML Tables Deployment	
AutoML Tables Online Prediction	
AutoML Tables Training	
AutoML Video Classification Batch Predictions	
AutoML Video Classification Model Training	
AutoML Video Object Tracking Batch Predictions	
AutoML Video Object Tracking Model Training	


Product
Data
Model



FRONTEND

BACKEND

Medium

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