Google Cloud Easy as Pie Serverless Hackathon

Trash Recycle Classification
by
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Build with Cloud Run and
TensorFlow.js (Teachable Machine)

ABOUT YOUR PROJECT

THE ISSUE

Trash are is problem that related with environment and climate change, even plastics trash also added problem because plastics trash is very hard for recycle. In 2050, total plastics is same ratio with total fish in the world. So therefore, I want create a machine learning model for trash recycle.

AND …. ????

THE SERVERLESS SOLUTION

I create a machine learning model use Cloud Run by Google Cloud for deploy model and predict model with container. I also use Teachable Machine (Tensorflow.js) for write machine learning model.

HOW IT WORKS

Teachable Machine

Teachable Machine is website about training data for machine learning models and no need expertise or coding required.

Cloud Shell Editor

Cloud Shell Editor are is Google Cloud product for online code editor via Google Cloud CLI. This product write code with Tensorflow.js and Docker.

Cloud Build

Cloud Build are is Google Cloud product for build, test, and deploy on serverless CI/CD platform and can working with Cloud Run.

Cloud Run

Cloud Run are is Google Cloud product for develop and deploy highly scalable containerized applications on a fully managed serverless platform.

Web App

This web app can upload data (image/photo) and see results from ML model.

TRASH RECYCLE CLASSIFICATION

This project about classification of trash with recycle description (recycleable and organic) with machine learning.

The Issue

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Upload your image here :)

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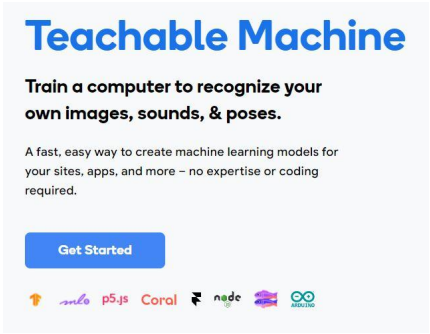
Recycleable: 0.00
Organic: 1.00



Teachable Machine

Cloud Shell Editor

Cloud Build

Cloud Run

GOOGLE CLOUD SERVICES USED

- **Cloud Shell Editor** : write code online on Google Cloud without install IDE or text editor.
- **Cloud Build** : build and test with Docker before deploy to Cloud Run by Google Cloud serverless on this hackathon.

  Cloud Build is easy use : gcloud builds submit –tag gcr.io/PROJECT_ID/cloudrunxtensorflowjs

- **Container Registry** : store and secure your docker container images.
- **Cloud Run** : serverless application with container images.

  Cloud Run also is easy use : gcloud run deploy –image gcr.io/PROJECT_ID/cloudrunxtensorflowjs

People use the web application (https://cloudrunxtensorflowjs-bfal2prnaq-uc.a.run.app) upload photo/image only and see result (recycleable or organic)

Thank you very much :)