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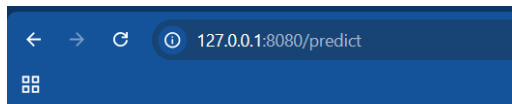
Batch Code: LISUM 46

Submission Date: 06.07.2025

Submitted to: Internship Mentor

Title: Deployment of Autism Detection Model using Flask and Google Cloud Run

## 1. Flask app running locally



### Autism Spectrum Disorder Screening

A1\_Score (0 or 1):

A2\_Score (0 or 1):

A3\_Score (0 or 1):

A4\_Score (0 or 1):

A5\_Score (0 or 1):

A6\_Score (0 or 1):

A7\_Score (0 or 1):

A8\_Score (0 or 1):

A9\_Score (0 or 1):

A10\_Score (0 or 1):

Age:

Jaundice at birth (0 or 1):

Family member with ASD (0 or 1):

Likely ASD

## 2. Auth to GCP and Docker image build

```
Microsoft Windows [Version 10.0.26100.4484]
(c) Microsoft Corporation. All rights reserved.

C:\Users\rusla>cd "C:\Users\rusla\Desktop\Ruslan\Internship DataS\Week-4\autism-flask-app"

C:\Users\rusla\Desktop\Ruslan\Internship DataS\Week-4\autism-flask-app>gcloud auth login
Your browser has been opened to visit:

    https://accounts.google.com/o/oauth2/auth?response_type=code&client_id=32555940559.apps.googleusercontent.com&redirect_uri=http%3A%2F%2Flocalhost%3A8085%2F&scope=openid+https%3A%2F%2Fwww.googleapis.com%2Fauth%2Fuserinfo.email+https%3A%2F%2Fwww.googleapis.com%2Fauth%2Fcloud-platform+https%3A%2F%2Fwww.googleapis.com%2Fauth%2Fappengine.admin+https%3A%2F%2Fwww.googleapis.com%2Fauth%2Fsqlservice.login+https%3A%2F%2Fwww.googleapis.com%2Fauth%2Fcompute+https%3A%2F%2Fwww.googleapis.com%2Fauth%2Faccounts.reauth&state=omXxDU1k4wKpkd0581it0hoR2yUcNQ&access_type=offline&code_challenge=Qb7H5wPAPB1RKh5aiIhpATiixTDq2G7YaqKlvF8C0M4&code_challenge_method=S256

You are now logged in as [tigrrustik@gmail.com].
Your current project is [rustik-flask-deploy]. You can change this setting by running:
  $ gcloud config set project PROJECT_ID

C:\Users\rusla\Desktop\Ruslan\Internship DataS\Week-4\autism-flask-app>gcloud builds submit --tag gcr.io/rustik-flask-deploy/autism-flask-app
Creating temporary archive of 7 file(s) totalling 8.4 KiB before compression.
Uploading tarball of [...] to [gs://rustik-flask-deploy_cloudbuild/source/1751819257.618549-cca65060f93945a9a876bd262eeb8721.tgz]
Created [https://cloudbuild.googleapis.com/v1/projects/rustik-flask-deploy/locations/global/builds/79aeea0a-d0ab-46bf-865f-fc9d03f30f13].
Logs are available at [ https://console.cloud.google.com/cloud-build/builds/79aeea0a-d0ab-46bf-865f-fc9d03f30f13?project=351118108840 ].
Waiting for build to complete. Polling interval: 1 second(s).
----- REMOTE BUILD OUTPUT -----
starting build "79aeea0a-d0ab-46bf-865f-fc9d03f30f13"

FETCHSOURCE
Fetching storage object: gs://rustik-flask-deploy_cloudbuild/source/1751819257.618549-cca65060f93945a9a876bd262eeb8721.tgz#1751819259896282
Copying gs://rustik-flask-deploy_cloudbuild/source/1751819257.618549-cca65060f93945a9a876bd262eeb8721.tgz#1751819259896282...
/ [1 files][ 3.8 KiB/ 3.8 KiB]
Operation completed over 1 objects/3.8 KiB.

BUILD
Already have image (with digest): gcr.io/cloud-builders/docker
Sending build context to Docker daemon 7.168kB
Step 1/6 : FROM python:3.10-slim
3.10-slim: Pulling from library/python
3da95a905ed5: Pulling fs layer
0ebcc011f0ec: Pulling fs layer
92d63ec5cbeb: Pulling fs layer
```

```
C:\WINDOWS\system32\cmd. X + v
Pushing gcr.io/rustik-flask-deploy/autism-flask-app
The push refers to repository [gcr.io/rustik-flask-deploy/autism-flask-app]
023f670f282d: Preparing
32db7fdff269: Preparing
305fe2176c77: Preparing
31abbb538de0: Preparing
a2ccf7527b3c: Preparing
abd92ba2021e: Preparing
1bb35e8b4de1: Preparing
abd92ba2021e: Waiting
1bb35e8b4de1: Waiting
31abbb538de0: Layer already exists
a2ccf7527b3c: Layer already exists
abd92ba2021e: Layer already exists
1bb35e8b4de1: Layer already exists
32db7fdff269: Pushed
305fe2176c77: Pushed
023f670f282d: Pushed
latest: digest: sha256:0f8ce230e373c4d74628469ebdadac2fd795ab8a32176541227c12198f203c36 size: 1786
DONE
-----
ID: 79aeea0a-d0ab-46bf-865f-fc9d03f30f13
CREATE_TIME: 2025-07-06T16:27:40+00:00
DURATION: 35S
SOURCE: gs://rustik-flask-deploy_cloudbuild/source/1751819257.618549-cca65060f93945a9a876bd262eeb8721.tgz
IMAGES: gcr.io/rustik-flask-deploy/autism-flask-app (+1 more)
STATUS: SUCCESS
```

### 3. Cloud Run deployment

```
C:\WINDOWS\system32\cmd. X + v
a2ccf7527b3c: Layer already exists
31abbb538de0: Layer already exists
1bb35e8b4de1: Layer already exists
abd92ba2021e: Layer already exists
b7e0fe39f3c7: Pushed
7864de41c10c: Pushed
f2ba1e70f30e: Pushed
latest: digest: sha256:33cb13773a64dee4ae01f903a0c0557ea2cc594c85375ee43483c9c98a9ea1d6 size: 1786
DONE
-----
ID: 8890916a-d407-4e4b-80f5-fb76a1f33ab9
CREATE_TIME: 2025-07-06T16:52:33+00:00
DURATION: 52S
SOURCE: gs://rustik-flask-deploy_cloudbuild/source/1751820751.245538-137f21fe681d4e16a511b623e06e6890.tgz
IMAGES: gcr.io/rustik-flask-deploy/autism-flask-app (+1 more)
STATUS: SUCCESS

C:\Users\rusla\Desktop\Ruslan\Internship DataS\Week-4\autism-flask-app>gcloud run deploy autism-flask-app --image gcr.io/rustik-flask-deploy/autism-flask-app --platform managed --region europe-west1 --allow-unauthenticated
Deploying container to Cloud Run service [autism-flask-app] in project [rustik-flask-deploy] region [europe-west1]
OK Deploying... Done.
  OK Creating Revision...
  OK Routing traffic...
  OK Setting IAM Policy...
Done.
Service [autism-flask-app] revision [autism-flask-app-00007-s7q] has been deployed and is serving 100 percent of traffic
Service URL: https://autism-flask-app-351118108840.europe-west1.run.app

C:\Users\rusla\Desktop\Ruslan\Internship DataS\Week-4\autism-flask-app>
```

## 4. Log output confirming model load

Free trial status: €256.19 credit and 90 days remaining. Activate your full account to get unlimited access to all of Google Cloud—use any remaining credits, then pay only for what you use. Dismiss Activate

Google Cloud Flask Autism Deploy Search (/) for resources, docs, products, and more

### Logs Explorer

Query library Share link Preferences Last 1 hour BST

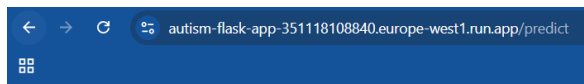
SEVERITY	TIME	SUMMARY
>	2025-07-06 17:54:07.389	warnings.warn()
>	2025-07-06 17:54:07.390	FILES IN CURRENT DIRECTORY:
>	2025-07-06 17:54:07.390	['.dockerignore', 'Dockerfile', 'app.py', 'autism_model.pkl', 'templates']
>	2025-07-06 17:54:07.390	Model loaded successfully.
>	2025-07-06 17:54:07.390	* Serving Flask app 'app'
>	2025-07-06 17:54:07.390	* Debug mode: off
>	2025-07-06 17:54:07.399	[31m [!WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead. [0m
>	2025-07-06 17:54:07.399	* Running on all addresses (0.0.0.0)
>	2025-07-06 17:54:07.399	* Running on http://127.0.0.1:8080
>	2025-07-06 17:54:07.399	* Running on http://169.254.8.1:8080
>	2025-07-06 17:54:07.399	[3mPress CTRL+C to quit [0m
>	2025-07-06 17:54:07.399	Default STARTUP TCP probe succeeded after 1 attempt for container "autism-flask-app-1" on port 8080.
>	2025-07-06 17:54:07.471	run.googleapis.com /Services.ReplaceService _loy/revisions/autism-flask-app-00007-s7g Ready condition status changed to True for Re-
>	2025-07-06 17:54:09.942	run.googleapis.com /Services.ReplaceService _k-flask-deploy/services/autism-flask-app Ready condition status changed to True for Se-
>	2025-07-06 17:54:15.989	GET 200 2.09 KiB [10 ms Chrome 137.0. https://autism-flask-app-351118108840.europe-west1.run.app/
>	2025-07-06 17:54:16.004	169.254.169.126 - - [06/Jul/2025 16:54:16] "GET / HTTP/1.1" 200 -
>	2025-07-06 17:54:29.143	POST 200 2.14 KiB [11 ms Chrome 137.0. https://autism-flask-app-351118108840.europe-west1.run.app/predict
>	2025-07-06 17:54:29.153	/usr/local/lib/python3.10/site-packages/sklearn/utils/validation.py:2749: UserWarning: X does not have valid feature names, but LogisticR-
>	2025-07-06 17:54:29.153	warnings.warn()
>	2025-07-06 17:54:29.155	169.254.169.126 - - [06/Jul/2025 16:54:29] "POST /predict HTTP/1.1" 200 -

To view newer entries: Extend time by: 1 hour Edit time

### Recommended for you

- Using the Logs Explorer Help document The Cloud Logging lets you efficiently retrieve, view, and analyze logs from your queries.
- Quickstart: Cloud Logging tour and introduction Tutorial 20 min Get started with Cloud Logging and track down issues in your application.
- Quickstart: Collect logs from an Apache web server with the Ops Agent Tutorial Use the Ops Agent to collect logs from an Apache web server, and then view those logs with the Logs Explorer.
- Use cases for Logging Help document Explore use cases, best practices, and industry solutions.
- Architecture guides for monitoring and logging

## 5. Live prediction example



### Autism Spectrum Disorder Screening

A1\_Score (0 or 1):

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A3\_Score (0 or 1):

A4\_Score (0 or 1):

A5\_Score (0 or 1):

A6\_Score (0 or 1):

A7\_Score (0 or 1):

A8\_Score (0 or 1):

A9\_Score (0 or 1):

A10\_Score (0 or 1):

Age:

Jaundice at birth (0 or 1):

Family member with ASD (0 or 1):

Predict

No ASD traits detected