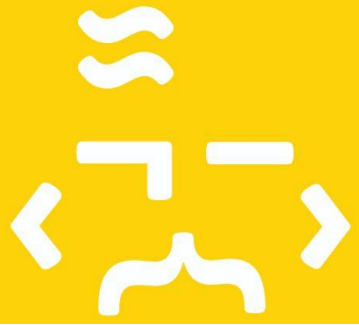
DEV CHALLENGE XIX



Final Task
Backend | DEV Challenge XIX

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1. Task description

We have preprocessed images of remote scanning, which reflects the probability of the location of mines on the given coordinates.

Format: png, grayscale byte color model without alpha channel.

Image contains:
— x any y coordinate grid, which are always white and 1-pixel wide. (for simplicity, we can assume that the image is aligned to the axes)
— cells, numbering starting from (0,0) at the top left angle.

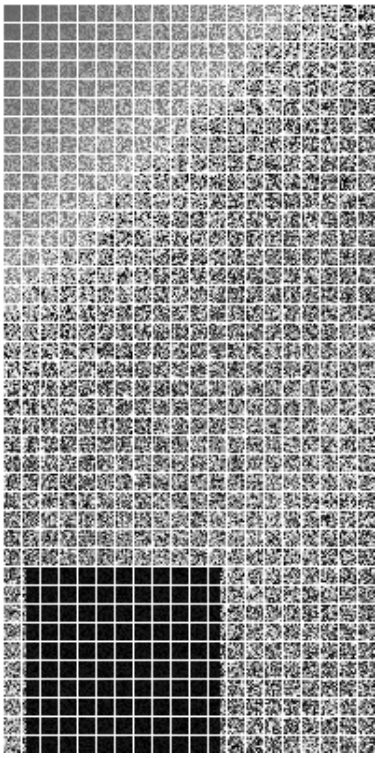
The probability of mines located in the cell is determined by darkness (i.e. number of dark pixels inside the cell).

POST /api/image-input

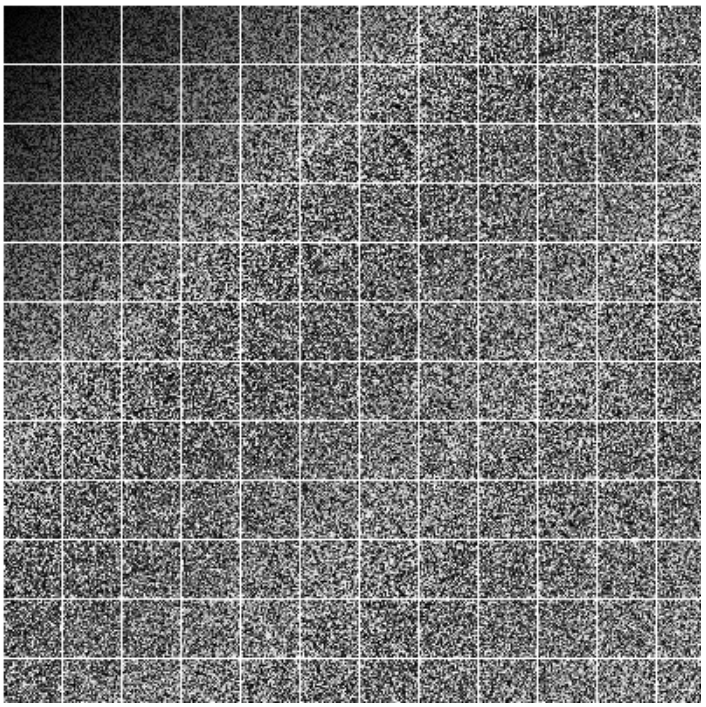
params:
```
{
  “min_level”: 0-100,
  “image”: “...” //  png image as base64 text
}
```

Process the image and return response with code 200 and body:
```
{
  “mines”: [ {
      “x”: 1,
      “y”: 1,
     “level”: 0-100  } ] }
```

Example 1:



Example 2:



Errors handling: In case of impossibility of image processing (absent or incorrect coordination grid, another color scheme, etc) we expect output **with HTTP code UnproceableEntity** and body:

{
"error": "string",
"details": object (optional detailed error information) }

2. Format of presentation of results

Downloads the decision in the Participant's account on the platform in **one file archive**.

☝ Please note that the .git directory should not be present in the archive
☝ Please note that the name of the archive and file names inside the archive should not contain your first or last name. The size of the solution archive should not exceed **10 MB**.

The Organizers and Judges reserve the right to disqualify the Participant's work if the work:

- contains any reference to the Participant's name, surname, e-mail address, company, address, or other personal data;
- completed in a different format than specified in the task;
- performed with the help of third parties, and not by the Participant personally.

The archive should contain:

- a 'docker-compose' file in the root, which starts a server with the given endpoints available from localhost as 'http://localhost:8080/'.
- README.md, where you wrote instructions on how to start service and tests and some thoughts about your choices during performing this task

3. Deadline for submission

October 28, 2022, at 17:30 (GMT+2) — after the time runs out, the possibility of uploading works to the platform will be automatically blocked.

4. Evaluation criteria

Criteria	Points
Technical assessment	**350**
Result Correctness	190
Following API Format	60
Image processing solution	100
Expert assessment	**290**
Performance	190
Test coverage	100

5. Contacts

Questions and clarifications regarding the content of tasks:
Slack channel: #nomination-backend.
☝ Judges will ignore questions that do not relate to the tasks of the Championship.

Organizational questions:
Contact us via e-mail hello@devchallenge.it or Slack channel #02-ask-the-organizers.