



# Optimal score for image quality

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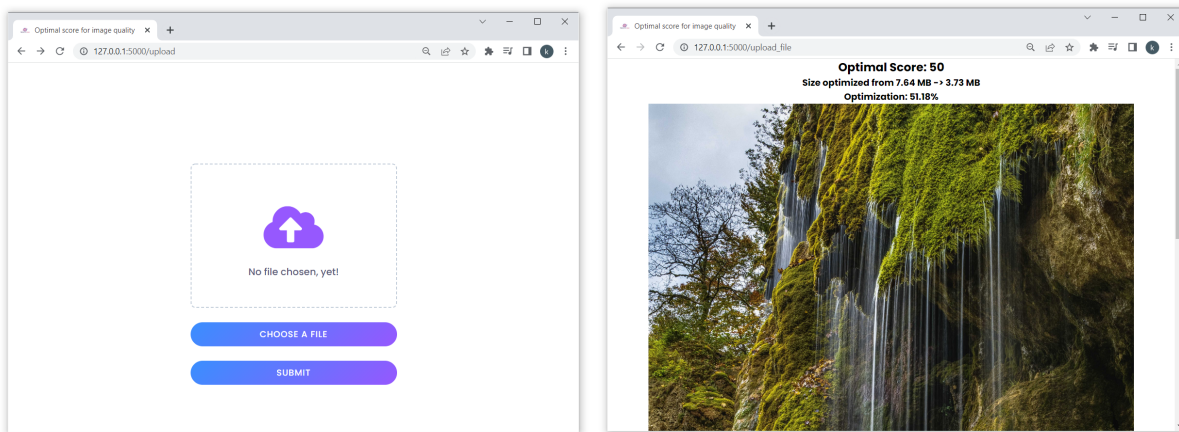
A website which calculates the optimal score for image quality for a given image and saved it on the server.

## DEMO

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\* the artifacts in the demo is due to gif compression used to save the video and not the alogorithm (Feel free to test).

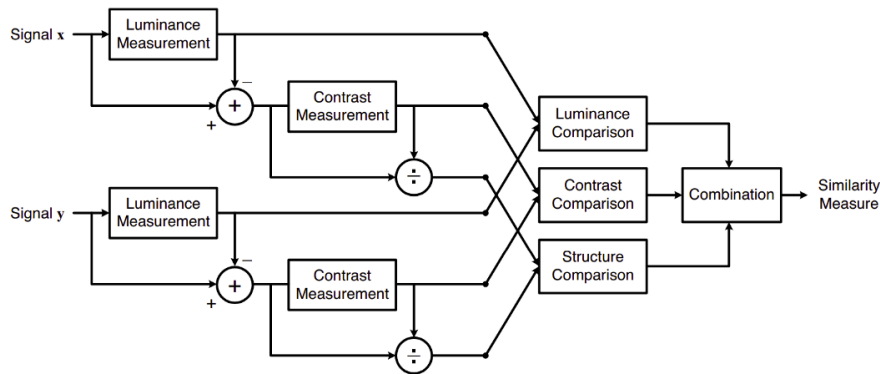
## About The Project



The project uses SSIM (Similarity Structural Image Metric) to calculate the optimal score for image quality.

## Features

- ☒ Image dimensions remains the same.
- ☒ There is minimal noticeable difference between the images.
- ☒ Faster and more accurate (no artefacts) than any CNN/GAN based approach (tested).
- ☒ Returns the image pixel density ratio for compression as mentioned in the question.
- ☒ No need for GPU on the server.
- ☒ Optimizes for human perception visual quality.
- ☒ Only saves the optimal image, uploaded image remains in memory buffer.
- ☒ No need to download the image from the server.
- ☒ Depends on standardized algorithm from `scikit-image`.
- ☒ Lower latency than other approaches.
- ☒ Very minimal code, to increase maintainabiity.
- ☒ Leverages parallelism to speed up the process.
- ☒ The algorithm is not dependent on the image size or format.

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## Structural Similarity Image Metric

### Built With

- python
- flask
- skimage
- Pillow
- torch (alternative backend)

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## Getting Started

Just install the required packages and run the server.

### Prerequisites

- install prerequisites

```
pip install -r requirements.txt
```

### Running the server

```
python app.py
```

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