User Guide: Crack Detection System Web Interface

This user guide provides step-by-step instructions for using the crack detection web application. The interface allows users to analyze surface images for cracks and contribute feedback to improve the system's accuracy.

Getting Started

The application is accessible via a web browser on your local machine at:

```
http://localhost:8500
```

Ensure that all services are running via Docker Compose before using the interface.

Step-by-Step Instructions

1. Upload an Image

- On the main screen, locate the **"Choose file"** button.
- Click it and select an image file (PNG or JPEG) of the surface you want to analyze.
- After selecting the image, click the **"Submit"** button to start the analysis.

2. Wait for Processing

- Once the image is submitted, the system will send it to the backend AI model.
- Processing may take a few seconds depending on system performance.
- A **loading indicator** or message will appear while the prediction is being generated.

3. Review the Prediction

- After processing, two images will be displayed:
  - The **original uploaded image**
  - The **predicted crack segmentation mask**, where cracks are highlighted
- Carefully review the output to determine whether the prediction is accurate.

4. Provide Feedback (Optional)

- If the crack detection result is **not satisfactory**, you can help improve the system:
  - Click the **"Submit for Retraining"** or equivalent feedback button.
  - This sends the image to the backend's feedback collection system.
- Submitted feedback images are stored for future retraining to improve model accuracy.

Tips for Best Results

- Use **clear, well-lit images** of the surface.
- Ensure the surface is fully visible in the frame.
- Avoid blurry or low-resolution images.