User guide

Application Installation Guide

Step 1: Install Models

1. **Download Models**

   Download the following models and save them in the `backend` folder.

   - **General**: [Download Link](#)

   - **Narrabeen**: [Download Link](#)

   - **Gold Coast**: [Download Link](#)

   - **CoastSnap**: [Download Link](#)

   - **coast_classifier**: [Download Link](#)

2. **Save Models to `backend` Folder**

   Ensure all models are downloaded and saved in the `backend` folder.

Step 2: Build and Start Docker Containers

1. **Build Docker Images**

   Open a terminal and navigate to your project directory. Run the following command to build the Docker images:

   ```
   docker-compose build
   ```

2. **Start Docker Containers**

   Once the build is complete, start the Docker containers by running:

   ```
   docker-compose up
   ```

   This will start your application and associated services.
   Make sure you already install model

Step 3: Access the Application

1. **Access the Local Server**

   After the Docker containers are up and running, open your browser and go to:

   ```
   http://localhost:3000/
   ```

   You should now be able to use the application.

Notes:

- Ensure that Docker and Docker Compose are installed on your system.

- If you encounter any issues during the download or running processes, check your network connection or the error logs for more information.

User Guide

1. View Switch

- **Function**: Toggle between uploaded images view and results view.

- **Operation**: Click the "View Switch" toggle in the top toolbar.

- **Use**: Quickly view uploaded images or processing results without re-uploading images.

2. Quality Check

- **Function**: Ensure only high-quality images are processed.

- **Operation**: Click the "Quality Check" toggle in the top toolbar to enable or disable.

- **Note**: Enabling this feature may increase processing time.

3. Upload Image

- **Operation**: Click the "Upload Image" button to select image files.

- **Supported formats**: JPG, PNG, JPEG.

- **Feature**: Upload single or multiple images at once.

- **View**: See thumbnails of uploaded images in the application.

- **Additional operations**:

  - Zoom: Click the image or the magnify icon below the thumbnail.

  - Delete: Click the delete icon below the thumbnail.

4. Get Result

- **Operation**: After uploading images, click the "Get Result" button to start processing.

- **Processing**: The system will perform shoreline detection on uploaded images.

- **View Results**: Once processed, results will display next to the original images.

- **Result formats**: Include both binary and color formats.

- **Additional operations**:

  - Zoom: Click the image or the magnify icon below the result image.

  - Download: Click the download icon below the result image, choose format (binary, color, pixel data CSV, or all files).

  - Delete: Click the delete icon below the result image.

5. Clear Image

- **Operation**: Click the "Clear Image" button to remove all uploaded images and processed results.
- **Caution**: This action is irreversible. Ensure you've saved necessary results.

6. Toggle All

- **Operation**: Click the "Toggle All" button.
- **Function**: Switch all result images between binary and color display modes.

7. Download All

- **Operation**: Click the "Download All" button, select download option.
- **Options**:
  - Download all binary images (ZIP file)
  - Download all color images (ZIP file)
  - Download all pixel data (CSV file)
  - Download all types (ZIP file, includes all formats)

8. View Logs

- **Operation**: Click the "View Logs" button.
- **Function**: Access detailed history of all actions performed in the application, including uploading, processing, deleting images, and other significant events.

Usage Tips:

- Processing time may vary depending on the number and size of images.
- Enabling quality check may increase processing time but helps improve result accuracy.
- Ensure you've saved necessary results before clearing images or performing other important operations.
- If processing errors occur, check image format and size, or try re-uploading.