



Video Interpolation: User Guide

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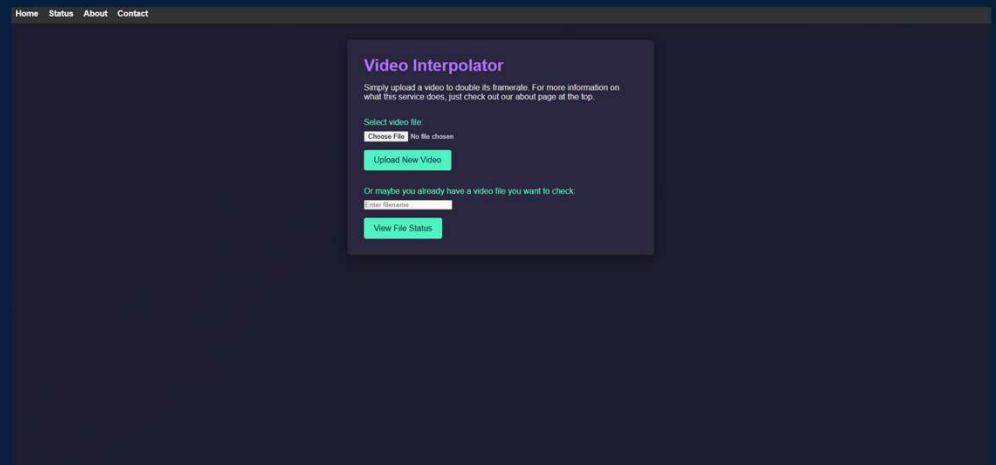
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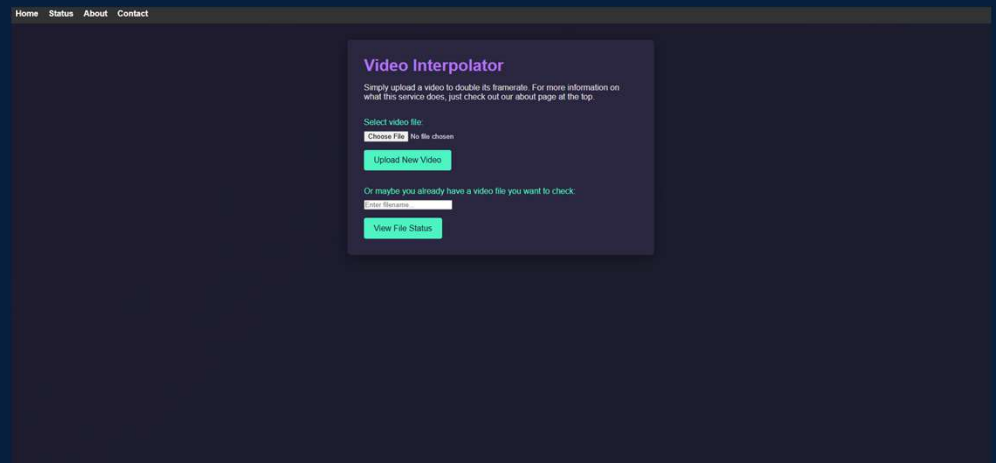
Video Interpolation

- This the homepage of the website where the user interacts with the software.
- The top navigation bar has four options including home button that navigates to the home page, Status button that states the status of a video interpolation, an About button that describes what our website does, and a contact button to contact us with any issues/bugs!



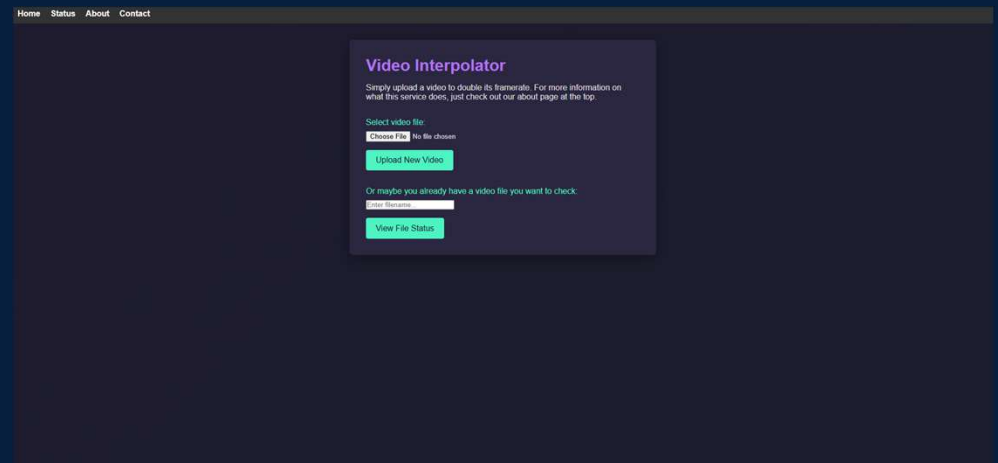
Video Interpolation

- On the homepage, you are greeted with our implementation of a video interpolator that allows you double the framerate of a video.
- Under the "Select video file" section, there is a "Choose File" button that will open a files window for you to select video file to be interpolated. The "Upload New Video" button will upload your selected video file to be queued for video interpolation.



Video Interpolation

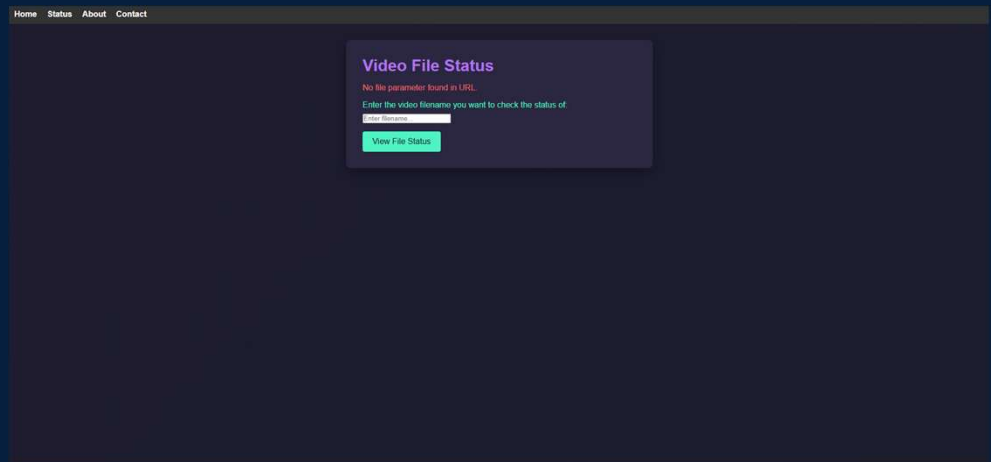
- Once your video file has been uploaded for video interpolation, you may wait for it and check the status by entering the filename into the Entry box below the "Or maybe you already have a video file you want to check" heading.



The screenshot shows a web application titled "Video Interpolator" with a dark theme. At the top, there is a navigation bar with links: Home, Status, About, and Contact. The main content area has a heading "Video Interpolator" followed by a brief description: "Simply upload a video to double its framerate. For more information on what this service does, just check out our about page at the top." Below this, there are two sections. The first section, "Select video file:", contains a "Choose File" button (which shows "No file chosen") and an "Upload New Video" button. The second section, "Or maybe you already have a video file you want to check:", contains a text input field labeled "Enter filename:" and a "View File Status" button.

Video Interpolation

- When entering a filename, you will be directed to the Video File status page. In this page, it will indicate whether the video file has been queued, errored, processing, or processed.
- If you were already on this Status page, you may enter a filename and click the "View File Status" button to view the entered file name's status.





Video Interpolation: Installation Guide

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Hardware Requirements

- A modern GPU with a high amount of VRAM, at least 8GB for smaller resolution video.



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Installation

◆ Frontend (React)

- Navigate to the frontend directory:
`cd interp-website`
- To run locally:
`npm run dev`
- To deploy:
`npm run build`
- Copy the generated dist/ files to your HTTP server for hosting.

◆ Backend (Java - Spring Boot)

- Navigate to the backend directory:
`cd nnqueue`
- Start the backend server:
`./gradlew bootRun`

◆ Neural Network Processor (Python)

Navigate to the processor directory:
`cd nnprocessor`

Create a Python virtual environment:
`python3 -m venv venv`

Activate the environment:
`source venv/bin/activate`

Install dependencies:
`pip install opencv-python moviepy numpy torch torchvision`

Start the processor:
`python3 -m nnprocessor`