SEENSORED: FACE ANONYMIZER USING YOLOV7 OBJECT DETECTION ALGORITHM

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INTRODUCTION

The study aimed to develop a YOLOv7-based face blurring application for video. The application can be used by content creators and video editors to anonymize the faces of unwanted people within the video. Media and broadcast organizations can benefit by reduction of video editing time cost. The study evaluated the level of acceptability of the developed YOLo-based video face blurs application using the ISO 25010 quality software model. The researchers aimed to aid media content creation through the development of a YOLO- based video face anonymizer desktop application. Blurring can be used to protect the privacy of individuals in videos without leaking their identities. The model was able to detect and blur faces using the YOLO-based video face blurring application using Python and OpenCV. The application cannot detect, and blur faces in videos real time. It can also restrict any information in the media that authoritative organizations can consider as propaganda. The researchers have used development tools in developing the SEENSORED desktop application (2021)

METHOD

The diagram defined the expected behavior, functionalities, functionalities, and requirements of the software. SEENSored Video Face Anonymizer uses YOLOv7 Object Detection Algorithm. The user would be able to export the video file with the processed blurred faces in the same video format (mp4 file) Detected the faces in imported.mp4 video file and create cache files of.mp3 video file. Exported the processed video file ?to desired storage location. The study utilized the YOLOv7 object.detection algorithm for aiding face detection and the processing of anonymization in the. @@Phenomenon of the desktop application software. The application?s user interface should be able to be shown to the user. The user would be. able to select among the detected faces in a bounding box, or remove the. blur for a specific detected face. The desktop application will go through each frame of the..mp4 video file to detect and track faces. The WIDER FACE tool is used to blurring faces in video files. The tool is based on the ISO 25010 software quality model. The Validation data split consisted of 3,225 images, covering 10% of the dataset. This structured evaluation ensures that the tool meets the required viewpoints for functional completeness, correctness, and appropriateness to meet user satisfaction. The anticipated results aim to appraise the application?s responsiveness and proficiency in resource management. The user should open the desktop application. The study aimed to develop a desktop application that aided content creation. The application was designed to assist content creators in producing and publishing content that is ethical. The study involved a panel of 45 respondents comprised of content creators, mass media professionals, common users, and IT professionals. The anticipated results seek to affirm the application's versatility in diverse contextual settings. The tables outline inspection methodologies aimed at furnishing a comprehensive assessment of the YOLO-based face anonymizer desktop application.

RESULTS

The desktop application can accept.mp4 video files exclusively. It can detect faces, blur selected faces, and adjust the tone pitch. The application can also export the processed video to a storage location. It has been rated as Highly Acceptable under Table 12 of the Table of its highest rating. It is available on the Google Play store. For more information on the application, visit the Googleplay.com site. The full report is available at the GooglePlay store. It includes a video player application for the user to see. The SEENSored desktop application is used to blur the faces in a video. It uses the YOLOv7 object detection algorithm to detect the faces. The desktop application can be shared with other users. It can be used to create content that is ethical and legal to use. The application has been tested for reliability, performance, and compatibility. It has been rated as Highly Acceptable and Reliable. It could have more needed requirements such as improved error handling and comprehensive testing to ensure the application?s reliability. The developed desktop application successfully runs on a desktop when the application's package is copied. The desktop application automates the face-blurring process, eliminating the need for manual intervention in each video frame. The project by the researchers aimed to develop a software application that aid the content creators, and video editors who are in the field of media and broadcast organization. Extensive testing and optimization procedures have been conducted to validate the application's efficacy across mp4 file formats. The application?s function performed its requirements to meet user needs. The study conducted aimed to develop a desktop application which enables an efficient editing software application for content creators and video editors. The developed desktop application is only limited to processing video from file. It operates independently of the tools used in its development or the language installed on the desktop. The blurring mechanism of the developed application enhances efficiency, allowing users to focus on other aspects of video. The application only accepts.mp4 files, and a preview video for Face Selection later is shown. The study conducted aims to provide insightful information to guide future research initiatives.

DISCUSSION

The developed desktop application entitled ?SEENSORED: Face Blurring Using YOLOv7 Object Detection Algorithm? is described. The application could be the efficient solution for blurring faces in a.mp4 video file. It was rated highly for its ease of use and compatibility with a wide range of laptops and desktops. It also enabled the user to disregard the faces that appear and disappear. The software is designed to be used in the news media industry. It is intended to be a tool for content creators or editors in the industry of mass media. The application allowed the user to import a.mp4 file, and the application ternallywould only accept.mp3 video files only. Users were given the choice to either watch the output video, access the folder where it's stored, or opt to edit another video for face blurring. The application effectively detected faces and displays their actual Face ID. It enhances efficiency for editors in the content creation and mass media industries, streamlining their content creation. It ensures higher standards of safety and quality in the produced video. The application received high marks for its security. Users may utilize a "Select All" option to conveniently choose all detected faces. The feature of detecting similar faces can be improved by employing better algorithms. The distances from the camera, and different hairstyles, as it can lead to some people recognizing each other, can also be considered a problem. The application offered users a choice of four blur types, including black, white, pixelation, and standard blur, allowing for versatile customization of the blurring effect.