Android Canvas with Image Processing Techniques

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Abstract-The goal of this project is to create application for the open source mobile phone OS Android. This project helps user to draw a picture under different circumstances and to sketch it. Nowadays the architecture drawing is mainly based on computers, by using powerful design software architects can get the most accurate and clear drawings. Smart phone can also works as minicomputer for architecture drawing by using related software to check the original drawing and do some changes. A canvas works for you as an interface to the actual surface upon which your graphics will be drawn-it holds all of your "draw" calls. Via the Android Canvas, your drawing is actually performed on an underlying Bitmap, which is placed into the window. Android Canvas will help you develop applications that contain rich 2D graphics like backgrounds. It is also used to designing layouts and backgrounds. The project Android Canvas with Image Processing Techniques uses the hand recognition technique to draw the pictures or the drawing. This project is mainly for children. The children can easily able to draw pictures and can colour it. This application which reduce the usage of pen and paper for drawing. The hand recognition has done using image processing and it is applied for drawing the picture. The children can use more tools to draw pictures. The user may able to cut, copy, paste, colour, crop, zoom and so on. The proper tools can be used in the image processing technique to bring this application to have more user friendly. This application can help the kids to think more creativity in drawing.

I. Introduction

The project Android Canvas with Image Processing Techniques uses the hand gesture tracking technique to draw the pictures or the drawing. This android application which is user friendly and make many people to attract towards the drawing. This is the paint application which is used as an android application in the android devices. The kids can easily able to draw using this application. This application which reduce the usage of pen and paper for drawing. This application can be developed with many more tools where many actions can be performed in it. This image processing technique which is user friendly where everyone can able to draw in the screen easily. This application can be improved by using many tools to perform many shortcut activities. This application can be developed as like the paint in the android device. The paint in the android application which make many user to draw their views easily. This application which has the eraser tool to delete the errors in the drawing. The tools can be added like cut, copy, paste, colour, crop, zoom and so on. The more number of tool which will have like a mini Photoshop to the android device but this can be with the image which the user have drawn in the application. This android application which make the user to utilise their imagination at the particular time easily with the image processing technique. The proper tools can be used in the image processing technique to bring this application to have more user friendly.

II. Literature review

A. Pre-face

In this literature review, we study and analyze different mobile applications that were designed to draw image, recognize image or recognize objects in a picture and inform the user about the result of the request. This project is mainly related to image processing in order to extract text from images. This chapter investigates image processing, and presents applications that can draw and edit image. It looks at systems that recognize objects in an image and presents systems recognizing objects with extended functionalities, which describes the tools needed and used to create the applications

B. Image Processing

Image processing consists of converting an image into a digital form , and then performing operations on it such as extracting its content, or the information in it. It is also used for object recognition. A digital image is an array of square picture elements or pixels arranged in columns and rows. There are colour images, gray scale images and binary images. Colour images can be converted to gray scale in order to facilitate the

extraction of some information within the image. A grey scale image is an 8-bit image, in which each pixel has an assigned intensity between 0 (black) and 255 (white)

C. Phases for Processing Images

1. Pre-processing
2. Enhancement and display
3. Information extraction

Image pre-processing or image restoration consists of correcting the image from different errors, noise and geometric distortions.

Image enhancement improves the visual aspect of the image, after the correction of errors, to facilitate the perception or interpretability of information in the image.

Information extraction utilizes the computer's decision-making capability to identify and extract specific pieces of information or pixels.

The different image processing techniques used in the Phone Reader Project help in extracting the text contained in the image taken by the user.

D. Object Recognition Systems

Some systems allow the recognition of text and object from images, and provide even more functionalities, other than the translation.

As mentioned earlier, this paper highlights about an image that user draws. The image recognition algorithm used in this system processes the image to improve its low quality. The recognition process takes about 6 seconds. This idea sounds original, but does not seem very useful as the output is not read to the user, and there are no translations available. The image is then processed and only the numbers representing the value of the banknote are extracted and read to the user. The colour recognition is also done by processing a picture taken and identifying the main colour of the object

E. Android Operating Systems

Android is an operating system developed by Google's team for mobile devices. It is an open development Linux based platform. It was originally designed to support applications written in Java, but with Android NDK (Native Development Kit), applications can also be written in C or C++. A Text-to-Speech engine is also provided with the Android mobile phones. Android applications can be developed using Windows, Mac OS and Linux systems, thus no special hardware is required. The 13 most recommended IDE for developing Android apps is Eclipse

iOS is the mobile operating system created by Apple that runs on the iPhone since 2007. Its development requires Macintosh computers running on Mac OS X. iOS apps are written in Objective-C with the modern IDE Code, quite similar to Net beans, Eclipse, or Visual Studio.

III. Existing system

There are some of the existing system that are based on the image processing techniques. That basically uses the pictures to do some of the effect or uses the sketch to draw the image. This android canvas with the image processing technique mainly helpful for the kids where they can able to draw with their hand effectively because this android application is based on the hand recognition techniques. The android application with the image processing techniques can help people to draw the diagrams with the hand. The tools can be utilized to have a better performance on the android application with the image processing techniques. This image processing technique which is user friendly where everyone can able to draw in the screen easily. This is the paint application which is used as a android application in the android devices. The kids can easily able to draw using this application. This application can be developed as like the paint in the android device. The tools can be added like cut, copy, paste, colour, crop, zoom and so on. The more number of tool which will have like a mini Photoshop to the android device but this can be with the image which the user have drawn in the application. This android application which make the user to utilize their imagination at the particular time easily with the image processing technique. This existing system can be improved with more shortcut tools to have a better performance in the android application with the image processing techniques. This application which reduce the usage of pen and paper for drawing. At present this android application with the image processing technique have a tool which is used to erase the errors in the diagram. This android application which look like a kids playing board which is used for the drawing. This android application can be bring up with the more tools to improve and to bring out the small kids drawing skills. This android application can be mainly used by the kids where they used to draw something they think in the drawing board.

IV. Proposed system

The usage of the various drawing tool and the usage of the pen and the paper can be made in the form of the android application with is an android canvas with image processing technique. This android application which will be developed with more number of the shortcut tools where many actions can be performed

easily with the help of the tools. The tools that can be added like color, crop, cut, copy, paste, eraser, the thickness for the pen. This android application which uses the hand recognition technique to draw the diagram in the application. The diagram can be saved with can be used in the future for the reference and for the imaginations. At present this android application with the image processing technique have a tool which is used to erase the errors in the diagram. This android application which is an user friendly application where the kids also use to draw the diagram like using the pen and the paper. This android application which will attract many number of the kids towards to the drawing. This android application which uses the XML and the Java for the development. The pictures can be cropped and can be merged with the drawing with help of this android canvas with the image processing technique. The merging of the pictures and the drawing which have more creativity and the innovation to the drawing in this android application

V. Conclusion

Thus we have developed more tools for the hand recognition drawing and to have the crop, cut, copy, paste and many tools for the drawing. The picture can be also cropped and can be merged to the diagram which is drawn in this android application. The drawings drawn in this application can be saved and can be viewed in the future. The kids can be attracted towards the drawing with the help of this android application. This android application which can bring out many painters to this world by bringing their skills from the childhood days itself.

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