

Drawing Illustration Using Android Studio

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Abstract - This building is implemented with Android and machine learning in mind. We can doodle or sketch on our phones. Change a pixel at a nice spot. In this project, the programme has a variety of specialised brushes and brush sets to help you with your illustration, and it is fully customisable, allowing users to design their own brushes. Choose a shading utilizing various shading models, e.g., RGB, HSV, or by utilizing a shading eye dropper.

Also, color pallet generator victimization machine learning makes it simple to form a color palette from any image, therefore it will come back the color palette as the second array of colors. Which follows the k-mean bunch algorithmic program?

Keywords: *Drawing App, canvas, Android App, colors*

INTRODUCTION

Drawing Apps are programs that help you to create simple images called Raster graphics. These applications have various brushes that assist you to create drawings. We are going to create such software that can be used to make realistic sketches, Drawings with ease. Our project is an android application. This application will enable the users to draw or sketch on any android mobile phone. This cloud would be accessible only from an android phone connected to the Kit Kat version. Each user can do draw save or share his-her own creative ideas from their mobiles. And the GUI of the application will also help to draw free of distractions so you can focus on capturing and expressing your ideas.

RELATED WORK

We make use of A pie menu (also known as a radial menu) is a circular context menu with selections that change depending on which way you look at it. It's a control element with a graphical interface. A pie menu consists of multiple "pie slices" arranged around an inactive core, and it works best with a stylus but also with a mouse. For a simple mechanism to exit the menu, pie slices are designed with a hole in the center. [1]

Designers and artists use color palettes to make their website or drawing more visually appealing to clients. The aim of our project is to create a color scheme utilising machine learning algorithms such as K-means clustering and the Median cut algorithm. There is no tagged data for these types of clustering because they are unsupervised machine learning algorithms. [2]

METHODOLOGY :

CANVAS: Make huge canvases. Swipe Flip Canvas from the marking menu to flip all content in the canvas, mirror the canvas, and also generate multiple layers of canvas with a variation. [3]

TOOL SELECTION: All tools are visible on the toolbar, rather than being buried in auxiliary menus.

SYSTEM ARCHITECTURE

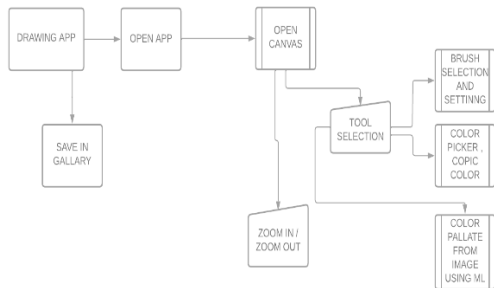


Fig : System Architecture

When the user opens the application, the user has to register and log in to the application. When user successfully login the app shows activity to create a canvas. When a user created a canvas user will get a blank canvas where the user can illustrate their ideas. We are adding a pie menu so that users' screen is a distraction-free interface. The Pie menu has a different tool in it. In tools selection, users can select different tools for their drawing and save them on the device.

RESULT:

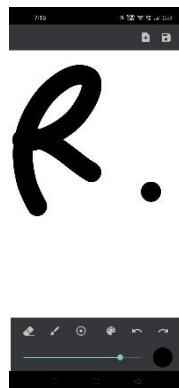


Fig: Canvas by default brush and color

The brush tool is used to select a brush when the application is open. It provides a default brush with a round tip and a default color in black as shown in figure. User can customize their brush size with a scrollbar so it can reduce and maximize the brush size.

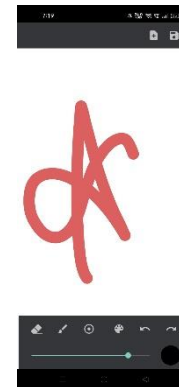


Fig : change color and different size

This is the default size of the canvas. For now we provide 100% of the screen for canvas.

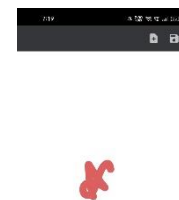


Fig : Canvas after zoom out

When the user drags their fingers inside the screen it will move in any direction. When the user drags or pinches two fingers at the same time on the inside directly on the screen it will zoom out. And pinch fingers in the outside direction of the screen it will zoom in the screen.



Fig : Eraser Tool

The eraser tool erases the design created on canvas. It is also customizable so user can change their eraser size.

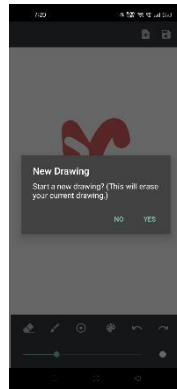


Fig: select for new drawing (clear)

When the user opens the application on their android devices it will open a blank canvas where the user can draw their illustration. Design their ideas. Or the plus sign button is a clear canvas when the user clicks on the plus sign button it will give a dialogue box that says new drawing.

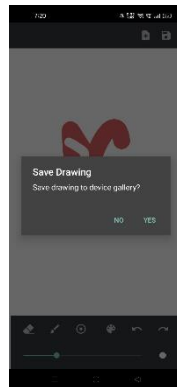


Fig : Save tools

When the user clicks on the save button it saves the design on canvas in a user storage device in jpg format.

CONCLUSION

In this project we are able to create proper GUI to our project.

Completed canvas, tools, brushes section

We are provided colour picker so that user can use different colours in designing.

We create undo and redo option so user can do undo/ redo operations.

We provide customizable size so user can draw in different sizes.

References

- [1] D. Hopkins, "The Design and Implementation of Pie Menus," 2018.
- [2] Prof. Mr. Mukesh Chavan¹, Indrajeet Dighe², Suhas Tope³, Vishal Kothare⁴, "Colour Palette Generation using Machine learning algorithms," *International Research Journal of Engineering and Technology (IRJET)*, vol. 8, no. 5, p. 4, May 2021.
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