

Pixart

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User's Manual

Pixart is an art generating java application which generates an abstract art piece based on the user inputs.

Installation Instruction

Pixart requires java IDE and java standard libraries to run.

Linux:

1. Git clone Pixart

```
$git clone https://github.com/olinminions/Pixart.git
```

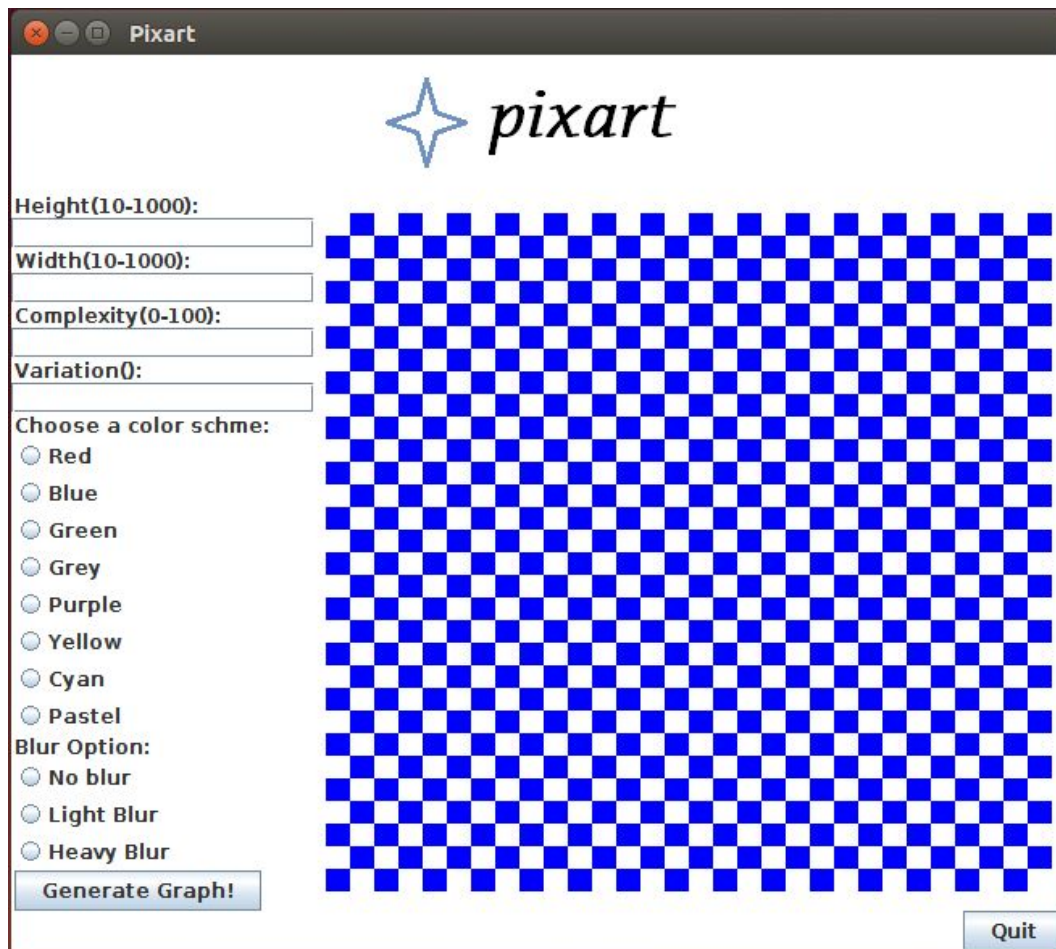
2. Run the run.sh script in terminal

```
$ bash ./run.sh
```

Windows:

1. Download zip file at <https://github.com/olinminions/Pixart.git>
2. Run PixartGUI.java in your java IDE

How to use

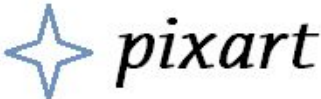


The starting GUI of Pixart

Pixart gets 6 inputs from the user: height and width of image, complexity, variation, color scheme, and blur. Height and width are used to determine the pixels the GUI will have. There are 8 color schemes for the user to choose from - Red, Blue, Green, Pastel, etc.. - and this determines the overall color of the image generated. The user can also choose how much blur they want in their image. Complexity and variation are inputs the user can experiment with to generate image to their likings. See User Interaction below for more details.

However, be aware that same parameters might not generate the same image twice. Once the parameters have been set to your liking, press on 'Generate Graph' button to get an pixelated abstract image for yourself.

Resize the image by resizing the app window, you can change your image proportions by resizing the image. Save your graph by taking a screenshot. If you like an image, remember to save it before pressing the Generate Graph button, as you can't get your graph back.



Height(10-1000):

100

Width(10-1000):

100

Complexity(0-100):

60

Variation(0 - 1770):

1000

Choose a color schme:

☐ Red

☐ Blue

☐ Green

☐ Grey

☐ Purple

☐ Yellow

☐ Cyan

☒ Pastel

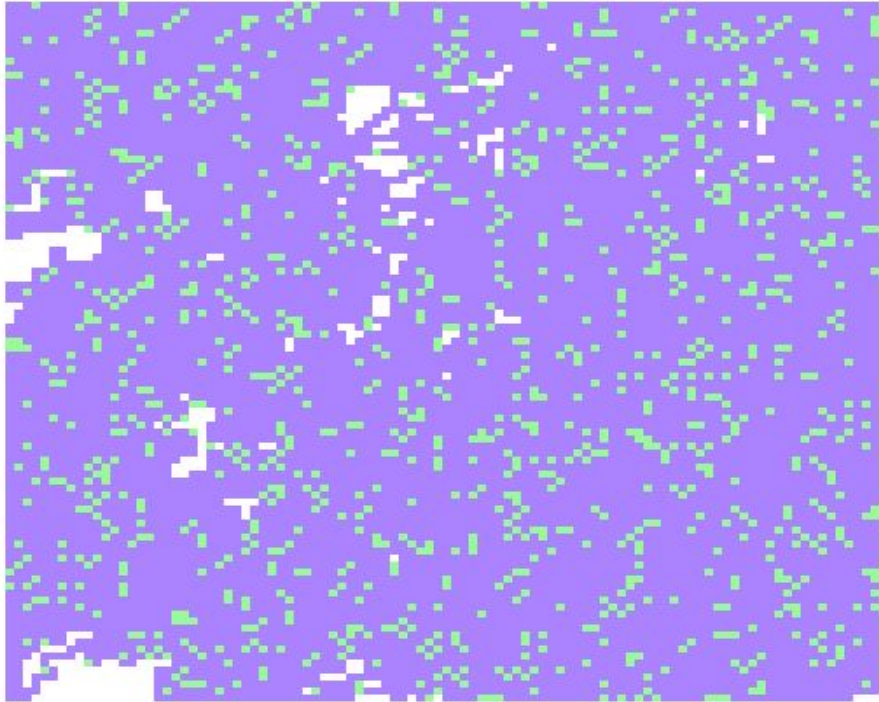
Blur Option:

☒ No blur

☐ Light Blur

☐ Heavy Blur

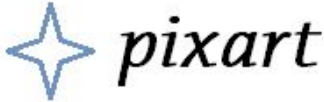
Generate Graph!



Quit

Example 1

For the example above, the image dimension was specified to be 100 by 100, and has 10,000 pixels. It is in Pastel color scheme (which is a combination of several colors) and there is no blur.



Height(10-1000):
100

Width(10-1000):
100

Complexity(0-100):
60

Variation(0 - 1770):
1000

Choose a color schme:

☐ Red

☐ Blue

☐ Green

☐ Grey

☐ Purple

☐ Yellow

☐ Cyan

☒ Pastel


Blur Option:

☐ No blur

☒ Light Blur

☐ Heavy Blur

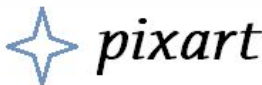
Generate Graph!



Quit

Example 2

For the example above, the image dimension was specified to be 100 by 100, and has 10,000 pixels. It is also in the Pastel color scheme and there is light blur.



Height(10-1000):
100

Width(10-1000):
100

Complexity(0-100):
75

Variation(0 - 2775):
1500

Choose a color schme:

☐ Red

☐ Blue

☐ Green

☐ Grey

☐ Purple

☐ Yellow

☐ Cyan

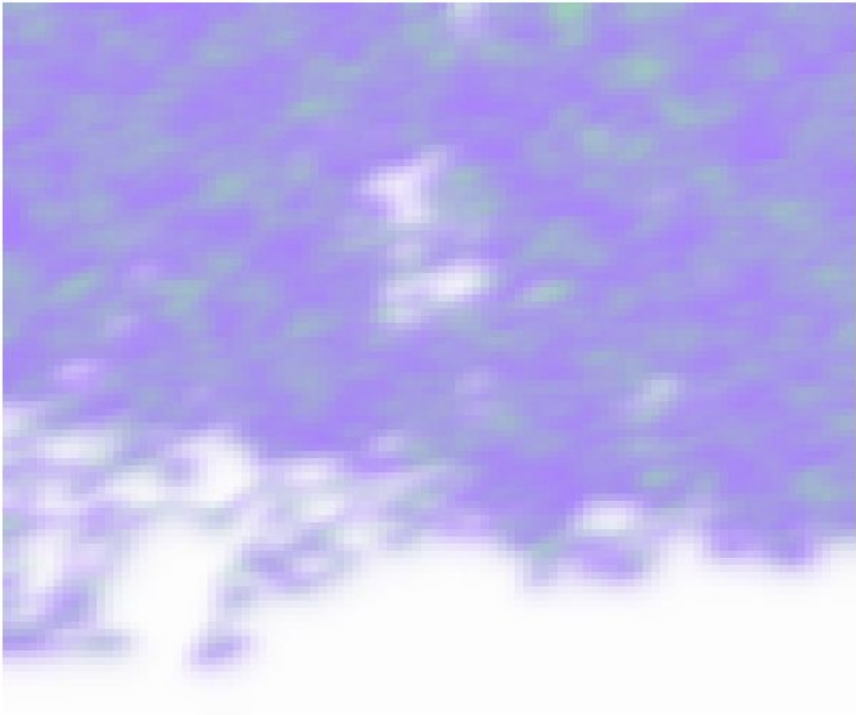
☒ Pastel

Blur Option:

☐ No blur

☐ Light Blur

☒ Heavy Blur



Generate Graph!

Quit

Example 3

This example have the heavy blur, more complexity and more variation.

As you can see, the parameters have subtle and random impact on the Pixart image, so it is up to you to experiment more!

Good luck on generating your favorite Pixart image.

User Interaction

Height: The number of rows of pixels. Enter a number between 10 and 1000. Press 'Enter' after you type in your desired number.

Width: The number of columns of pixels. Enter a number between 10 and 1000. Press 'Enter' after you type in your desired number.

Complexity: Decides how complex you want the image to be. This actually correspond to the number of vertices in the graph data structure used to create the Pixart image. Enter a number between 0 and 100. Press 'Enter' after you type in your desired number.

Variation: Decides how much variation in the color the Pixart image has, or in other words, how likely will there be darker colors and variation in the colors. This correspond to the number of edges we remove in the graph data structure used to create the Pixart image. Enter a number between the range in parenthesis (this is dependent on complexity). Press 'Enter' after you type in your desired number.

Color Scheme: Set the general color scheme of the art, given a choice of 8 pre-determined color schemes. You can only select one color scheme at a time.

Blur: How blurred the pixart image will be. Note that you can't generate an image with blur and unblur it, or generate an image without blur and blurs it. The image will only update when you click Generate Graph.

Generate Graph: The button that generates the art and updates the screen.

Quit: Exit the program and closes the window.