

DotVinci

Team 7 - Backlog

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Problem Statement

Pointillism is a popular form of art that is both cumbersome and time consuming for artists exploring the field. To help artists who wish to create drafts of their masterpiece or explore this form, we will simplify the process by allowing the user to upload a picture and experiment with various configurations of pointillism. This will drastically increase the ease and speed of the pointillism process.

Background

Pointillism is the technique of creating an image (or in this case, re-creating an image) using a series of dots, with each being a solid color.

Although there are many programs that allow users to explore pointillism, none are easy to use. They are all unintuitive, slow, and poorly designed. Our hope is to create a desktop application that solves all of these problems by being intuitive, responsive, and very easy to use. To compliment these core features we plan to provide extended features like adding filters and customizing the dots themselves.

Our primary target is amateur artists who wish to produce rough pointillistic works of arts from their existing pieces of work. We hope to add to their set of artistic tools by allowing them to directly modify the pointillism process, rapidly expanding the number of customizations they can do.

We are also targeting experienced artists who are interested in creating pointillized works of art but do not have the time or patience to do more creative options like converting the image to grayscale.

Requirements

Functional

As an artist, I would like to

- Open and view an image
 - Click on the open file dialogue
 - Browse computer and select an image
 - Image loads onto canvas
- Select filters to apply to the image
 - No filter
 - Grayscale

- Sepia
 - Negative
- View image processing over time
 - Change the speed of pointillization
 - Stop pointillization of the image upon user command
- Change region of image the filters are applied to
 - Select a rectangular area of the image
 - Apply filters to the selected area
- Change pointillism settings
 - Change the point shape
 - Change the point size
- Save created image
 - Email the image
 - Save image to computer

Non-Functional

As a user, I would like the program to have:

- Robustness
 - Application should not crash or freeze at any time
- Usability
 - Application should be easy to operate
 - No tutorials should be needed
- Platform compatibility
 - Application should be compatible with multiple operating systems (java application)
- Performance
 - Application should not lag while drawing the points on the image
 - Application should be responsive to user input and commands at all times

As a developer, I would like the program to have:

- Testability
 - Easy to run various test cases to ensure application requirements have been met
- Documentation

- Well documented functions to improve the readability and maintenance of the application
- Easy to collaborate on
 - Use a version control system to track the contributions of our development team