

Continued development of p5.js Showcase

Processing Foundation, p5.js

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Project Abstract

The Showcase page is a place on the p5js.org website where the users can see how different creators are creatively and inclusively engaging with the p5.js library. It gives you an overview of how this library can be helpful in different sectors of Art, Design and Technology.

The aim of this project is to further update and develop the gallery and include different projects from various fields and display them in a manner that would encourage other users to use this library creatively in their own projects. Another major focus of this project would be to include any possible features that would help increase the accessibility of the page to the users without making any compromises in the design aspect of the page.

After a brief rundown through the showcase page on the website, I feel that the following four milestones are the major changes that need to be worked on.

Milestones

1. Curation of Examples.
2. Addition of features to the showcase page.
3. Revision of the UI of the showcase page.
4. Improving the responsiveness of the page.

Project Description

The current page developed by Ashley Kang is well versed. Extending on this, curation of more examples to extend the library as well as the addition of different new useful features would make p5.js more accessible to the users. One of the main emphasis of the project will be on supporting and promoting the creators.

I. Curation of Examples

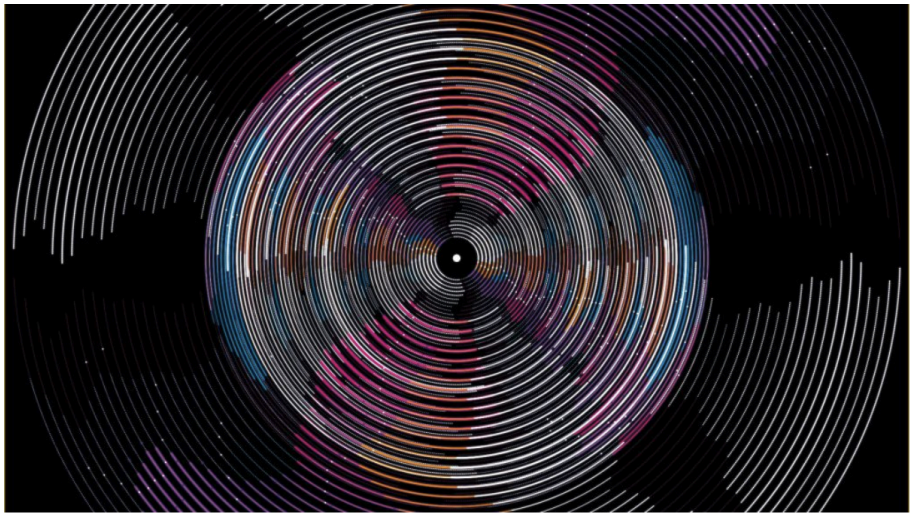
The most important thing about this task is the criteria for the selection of projects. There are projects which are not much complicated and easy and there are projects which use p5.js in a new way with advanced techniques. The curation of both types of projects is necessary. Simple yet innovative projects may help the new users to understand how to structure the codebase and build using the examples. The other more advanced projects would help the users who are

familiar with p5.js to think in a more different way about its application.Some of the criteria that I feel are necessary for selecting the projects are:-

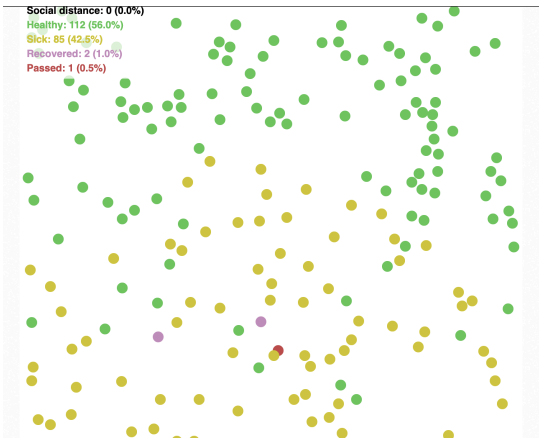
- One of the main criterias would be how an idea is implemented in a project. P5.js can be used to create various graphics, everyone knows this but how these graphics are used in a project to implement a specific idea would be an important thing to look for.
- Projects which integrate p5.js and other technologies of software development such as data visualizations or machine learning could be a good example for users. Such projects demonstrate that p5.js is not just limited to design alone.
- Graphics and Design being the strong point of this library, how creators use p5.js ingeniously in a design project would be a good thing to look out for.
- Projects which use p5.js to solve real world issues would be good projects to encourage users to look more into this library.

Featuring less known artists would be a priority too. Currently I am working on finding new creators. I have found various sites such as openprocessing.org , dribble.com, awesomeopensource.com, which feature various projects created by different artists and creators. Here's a list of some shortlisted projects or creators with different and unique projects. Following are some images of the projects that I personally was fascinated with.

1. **Using Audio data to create dynamic visualizations - data visualization using p5.js**



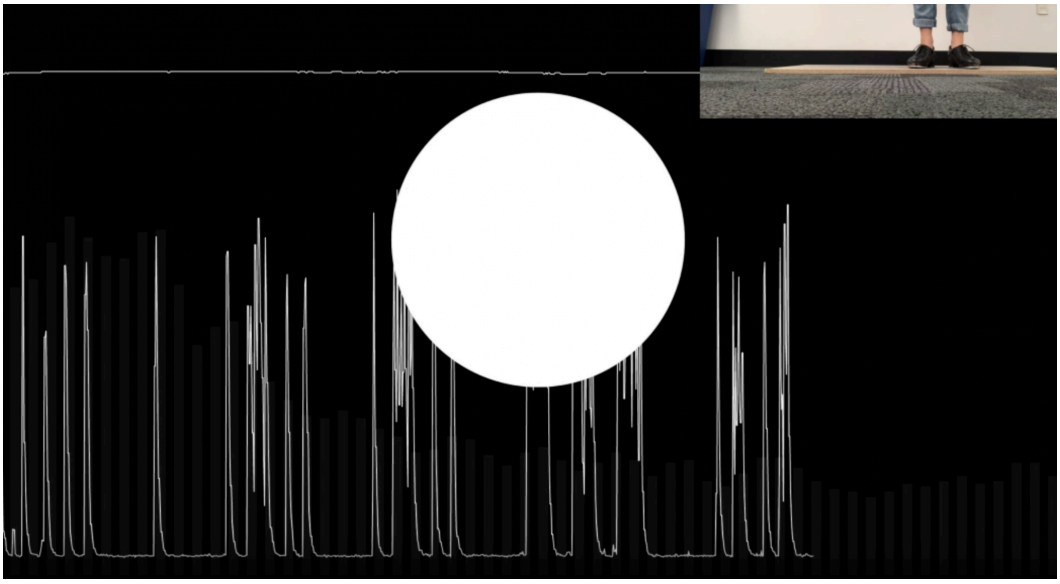
2. **A simulation using p5.js to show the spread of Covid-19 Disease**



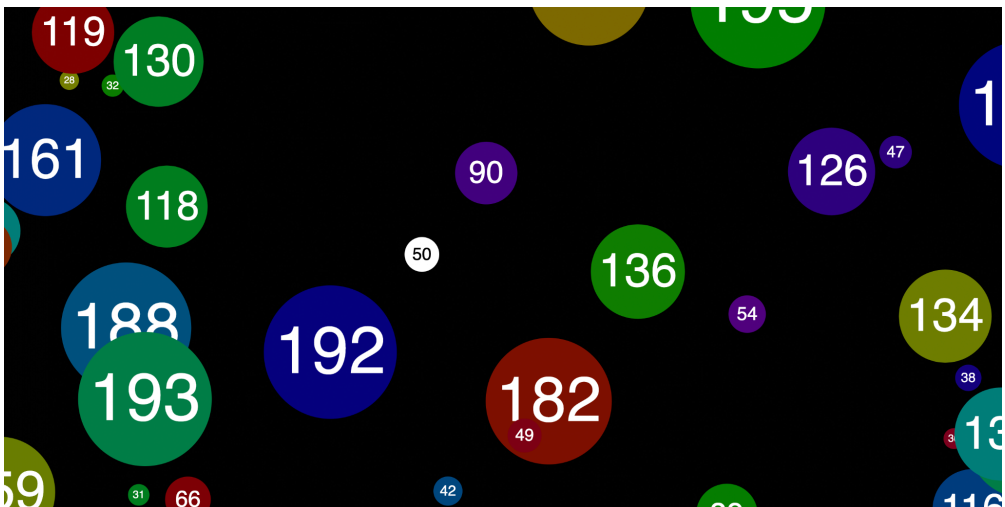
3. Creating a canvas which simulates the strokes of brush using p5.js



4. Visualization of tap dance using p5.js



5. An interesting numbers game made using p5.js



Another possible addition to the projects list would be Dan Shiffman's projects. No wonders Dan is one of the most creative persons who is well versed with p5.js. On his youtube channel, he has a series known as the Coding Challenge where he attempts to complete the different challenges. These challenges are so far one of the best and most innovative implementations of p5.js that I have seen. Including just a few projects might encourage the users to go through his entire list.

Once the projects are collected, the main task would be to portray them to the users in an intuitive manner. Questions such as: What inspired them to develop the specific project? What were the difficulties and how p5.js was crucial in the project? How did they come to know about p5.js? What are they currently engaged in and what are their future plans? Would be essential so as to inspire new users. Links to the portfolios of the creators would be helpful to promote them.

II. Addition of features to the showcase page

There are some features that can be added to the showcase page to increase its accessibility. The following are some of the features which can be of help.

1. Addition of an "idea button"
    - Many times it happens that one might have a good idea but does not have the prowess in the coding part of it, or one might know basic coding but structuring or implementing the code on a huge scale to develop the idea might be difficult for them. On the other hand, a person with good programming skills might not have a great idea yet, at such times a place where people could collaborate would be helpful
    - The ideas list obtained through this would help users to collaborate and create different projects.It might also help users to develop their own ideas by referring to the different ideas mentioned here.
    - We could provide a contact email by which users could get in contact and work and also once their project is ready could request/ask them to feature their project on the site.

2. Including a live demo of the project on the project page.
    - A project featured on the showcase page named 'p5.js shaders' has a small live demo on the page while other examples do not have one.
    - An interactive example would make the site more lively and more importantly the users could actually see the project. Most users do not

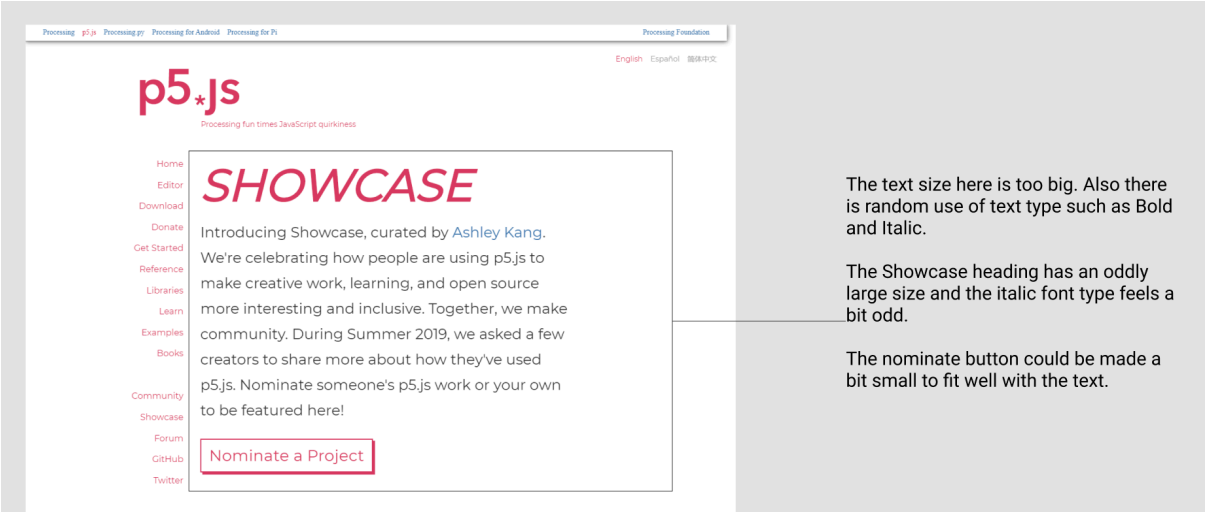
prefer to go on to different sites for viewing projects. A small demo or even a small video showing the project in action would surely encourage the users to view the entire project

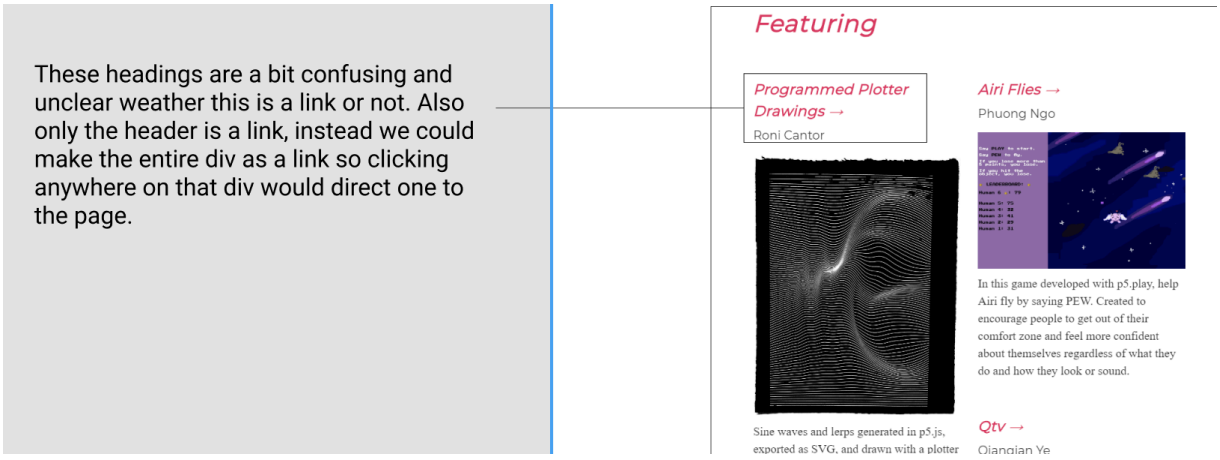
Apart from the ideas above, different ideas that might come forward during discussion or over the period, could be implemented. I am constantly going through different websites and articles to find ideas that are worth implementing on the page.

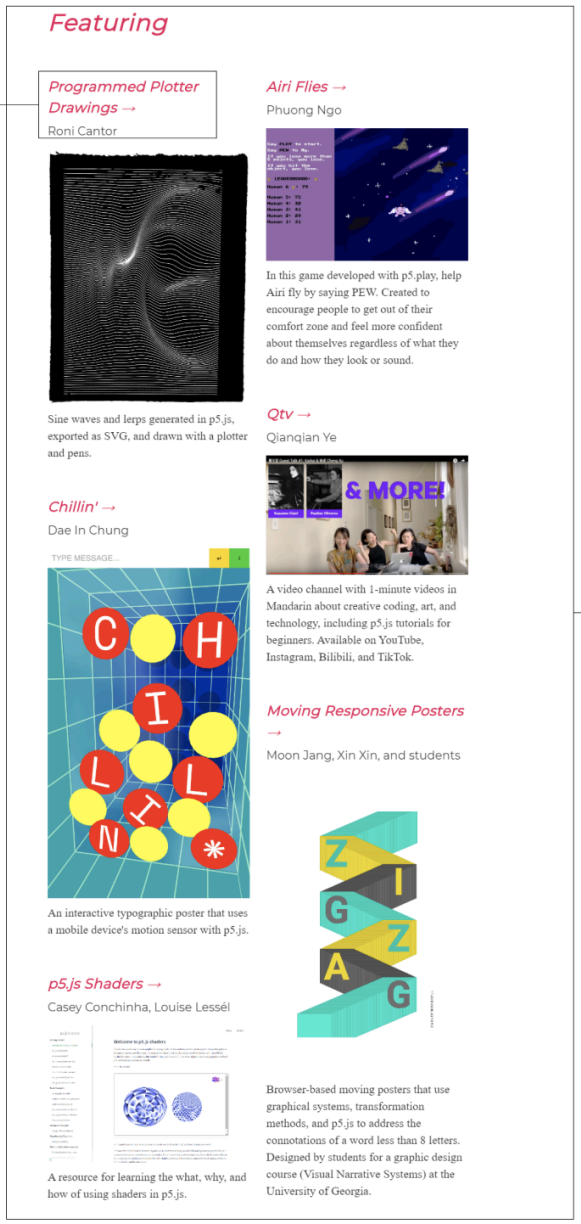
III. Revision of the UI of the showcase page

The current UI of the page is minimalist and clean which is quite necessary for a showcase page. But there are some areas which can be improved so as to make the page much more accessible and look good. The Changes have been listed below. A figma document of the same has also been linked.

Also the gallery is going to expand in the coming time and hence I think a categorized system would be helpful. Different projects categorized into different categories and then displayed like the examples page. Following are some changes that I feel necessary for the website.







Featuring

Programmed Plotter Drawings →
Roni Cantor

Sine waves and lerps generated in p5.js, exported as SVG, and drawn with a plotter and pens.

Chillin' →
Dae In Chung

An interactive typographic poster that uses a mobile device's motion sensor with p5.js.

p5.js Shaders →
Casey Conchinha, Louise Lessél

A resource for learning the what, why, and how of using shaders in p5.js.

Airi Flies →
Phuong Ngo

In this game developed with p5.play, help Airi fly by saying PEW. Created to encourage people to get out of their comfort zone and feel more confident about themselves regardless of what they do and how they look or sound.

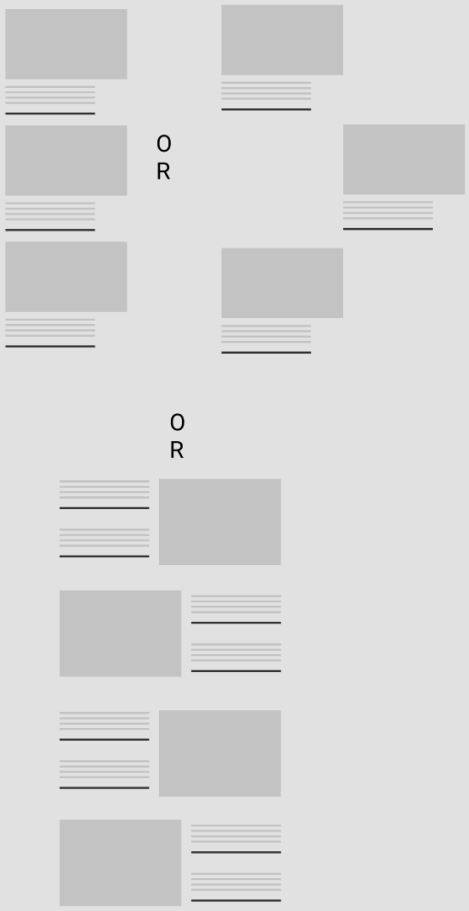
Qtv →
Qianqian Ye

A video channel with 1-minute videos in Mandarin about creative coding, art, and technology, including p5.js tutorials for beginners. Available on YouTube, Instagram, Bilibili, and TikTok.

Moving Responsive Posters →
Moon Jang, Xin Xin, and students

Browser-based moving posters that use graphical systems, transformation methods, and p5.js to address the connotations of a word less than 8 letters. Designed by students for a graphic design course (Visual Narrative Systems) at the University of Georgia.

The layout feels a bit clumpsy and clustered. The different projects cannot be easily distinguised. There is an irregularity with the size of the individual box for the project description. A simpler layout such as follows could be more effective and less clumpsy.



This layout, I particularly feel would be the best as it properly distingishes the projects from one another and also visually feels more organised with no gaps or irregularity.

Figma Document.

IV. Improvising the responsiveness of the page

Currently, the website is not completely adjusted for mobile and tablet views. Responsiveness is a key factor as most of the users these days prefer mobiles as their main source for surfing the internet.

The showcase page is adjusted for the mobile view but it is not much refined. The example thumbnails/images are huge. Since there are not many projects on the site, the current view might look good. But once there are enough projects, it would be clumsy and long.

Instead, I feel that whenever the showcase page is being viewed via a mobile, instead of showing the title, image, creator name and description we could show just the title and a thumbnail image(instead of the huge picture.) This way the projects would also be kept organized and would be more accessible.

Development Timeline

Throughout the period of 3 months, I will be free and I am not having any other commitments. I would mainly be working from my home or my dad's office with a good enough network connection at both the places. By the end of April, I would have finished my university examinations which would be ideal for me so that I can dedicate most of my time to this project.

1. May 4th - June 1st : Community Bonding

- These 3 weeks I will mainly spend time understanding the code base thoroughly and getting familiarized with it.
- In this time I will try to develop the exact plan of action as per the idea of the project after discussion with the mentor.
- The major goal of this period would be to find as many as possible projects created by different creators as per the criteria set. Any further necessary criteria apart from those mentioned above can be set after discussion with the mentor.

2. June 2nd - June 15th: Curation of Examples, Communication with the creators

- After a bunch of creators that are shortlisted, in this period the major focus will be to get in contact with them.

- A brief conversation with them regarding the development of the project would help me to understand their ideology behind the project and in general what all is going with them currently.
- Once all this is clear, I would make a draft about what all content and how the content should go on the website.

3. June 15th - June 28th: Addition of the examples to the website.

- Once the draft is prepared, I will discuss it with the mentors for any possible changes in it.
- Addition of all these projects to the website in an orderly manner and making the necessary changes to the codebase would be the main goal here.

4. June 29th - July 3rd: Evaluation Period

5. July 4th - August 26th: Addition of features

- In this period I will be focusing on the addition of any possible features after discussion with the mentors.
- An extended period has been given to this part incase if any previous work is pending, it could be covered in this time frame.
- Also, the curation of examples would be a long process. Different projects might be getting developed at different times which is why a constant search for different projects would be happening at all times.

6. July 27th - July 31st: Evaluation Period

7. August 1st - August 15th: Revision of the UI

- As discussed in the project description about the changes to the UI, in this time frame the major changes to the UI of the page will be made.
- Possible different changes after discussion with the mentors will also be made during this time.

8. August 16th - August 23rd: Improving the responsiveness

- Once all the features and projects are added, I would be working on making the page more responsive as described in the project description.
- Discussing with the mentors might bring up new ideas that can be implemented.

9. August 24th - August 31st: Final Check, bug fixing and submission.

- The final step of this entire project is to find any possible bugs and errors and fix them.
- If any planned work that was not completed in the time is remaining then I would try to complete it in this time.
- Push the changes live.

More About Myself

I am a student at the National Institute of Technology Rourkela who is currently pursuing B.Tech in Industrial Design. My journey into the world of software development began with web development. This journey led me to the different technologies in software development along with some interesting libraries. Eventually, I followed the MERN (Mongo-Express-React-Node) stack and with these technologies created some basic web apps.

Along with web-development I gradually developed an interest in UI/UX development. I was intrigued by the design principles involved and am currently trying to understand the different design principles.

After a brief time, I was introduced to the world of Open Source which is how I came to know about this p5.js library. This library particularly fascinated me because of its unique integration of design and programming for the web. It made it extremely easier to develop graphics for the web. I looked through the official website of p5.js and was keen to contribute to its development. Here are some of the contributions that I made in the development of the website.

PRs

- #551 (merged): Fixes the issue of non-responsive menu/sidebar for mobile view. (Added a hamburger menu which would collapse to reveal all the different menus.)
- #582 (merged): Added an example of Kaleidoscope behavior in the examples/interaction section.
- #549 (merged): Fixes the non-responsive behavior of an example on the get-started page.
- #545 (merged): Fixes a minor spacing problem of the menu on the reference page.

Issues Opened

- #569:- Proposed a drop-down menu for languages as many languages are going to be added in the future.

Work/Academic Experience/Projects.

1. **HackNITR website Development**:- Along with my fellow classmates, we developed a site for the Hackathon that was being held in our institute.
2. **An eCommerce site development**:- A curious project that I worked on for a startup co-founded by some of my seniors was to develop a basic eCommerce site that focussed on the sale of electrical components.
3. **A weather web app**:- A basic web app that displayed the forecast of the region that was searched using the dark-sky and map-box APIs.
4. **A Task manager app:**- Currently under development, it is built using the MERN stack which tracks all the completed and uncompleted tasks that a user adds to it.