

# Code Slang-p5.js Library



*Google Summer of Code 2022*

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## Contact Information

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## Detailed Project Idea

### Title

Code Slang-p5.js Library

### Size

I am applying for medium project (~175 hrs)

## Description

Traditionally, computer programming languages are designed so that the user can understand the computer. This creates a divide and gap in computer science because it excludes people who for a variety of reasons, have been turned off by code. "Code Slang" uses the playfulness of slang to invite people from different backgrounds to code

It is a library that uses slang to code. This project is in the beginning stages of its development. I would be helping to shape the beta version of this library by creating the first set of slang functions accompanied with examples and developing the code logic for the library.

## Introduction

p5.js is a JavaScript library for creative coding, with a focus on making coding accessible and inclusive for artists, designers, educators, beginners, and anyone else. The Foundation's mission to promote software literacy within the visual arts, and visual literacy within technology-related fields, make the community stand out and really helpful to the technology world. The organization works on the idea to provide free platforms for the students for creating visual arts and illustrations, to have a better understanding of the concepts.

It has many features and components like Editor, Libraries, Books, and many helping tools to learn JavaScript.

I started my Open Source Contribution journey from this organization, the other contributors and members of p5 in Github are very helpful and humble. I started making a p5 repository and making PRs on good first issues. This Foundation attracted me because of its great motive and its community's commitment to that.

## Approach

I want to create libraries for image processing using slang code that will enable the user to process the image using various slang options available. The various processing techniques include RGB to Gray Conversion, Mirroring, Thresholding-127, Resizing, Enhancement, Sharpening and Edge Detection. Once the user will upload the image from a local machine, then only the various processing techniques will be available to them and that too in slang language.

## Timeline

### Before 20th May

- Brush up on my coding skills and look for some helpful resources and videos.
- Go through available slang libraries and review the code, in order to get the brief of the code and documentation.
- Go through various image processing techniques required for the project.
- Go through p5 documentation and will try to get more familiar with its working and functionality.
- Gather more information on how I can create a better, fun and more useful library for people to learn and get their work done.

### Community Bonding Period(20 May - 12 June)

- Understand the work going on in the community.
- Getting the work going on in the community.
- Understanding in detail the project by getting details and more insight into the work.
- Understanding their expectations from my side and planning milestones and working with them accordingly.

## Coding Phase 1

(13 June - 24 July )

### **Week 1(13 June-19 June)**

- Start coding for the Slang library and adding the functions compression and saturating.
- Test these functions on some of the images and review their results.
- Discover cool and related slang words for these functions.

### **Week 2-3(20 June - 3 July)**

- Continue coding for the Slang library and adding the functions:- RGB to Grayscale conversion, Mirroring, Thresholding -127
- Test these functions on some of the images and review their results.
- Discover cool and related slang words for these functions.

### **Week 4-5(4 July - 17 July)**

- Continue coding for the Slang library and adding the functions:- Resizing, Edge detection, Enhancement, Sharpening.
- Test these functions on some of the images and review their results.
- Discover cool and related slang words for these functions.

### **Week 6(18-24 July)**

- Complete any required work for the site.
- Experiment with the new added functions and codes to check if they are working fine.
- Work on Code Refinement and add required comments.
- Make documentation and start making report for project.

## First Evaluation

(25 July - 31 July )

- Discuss the progress with the mentor and receive feedback.
- Any change prescribed by them will be properly discussed and updated accordingly.
- Errors collected in the layout will be resolved.
- Propose forward work.

## Coding Phase 2

(1 August - 4 September)

### **Week 8-10(1 August-21 August)**

- Work on the feedback provided by the mentors during the first evaluation.
- Continue coding for slang libraries and if required add one more function of compression.
- Check the code if all the changes are working fine till this stage without breaking.
- Develop the webpage with the working examples of these functions using HTML, CSS, and JavaScript.
- That webpage will have a default image but the user could upload their own image too. And will have two sections one of the original image and the other of the image with the functions applied by the user.
- Both Desktop and Mobile views will be considered to make the Example page responsive.

### **Week 11-12(22 August - 4 September)**

- Complete any required work for the site.
- Both Desktop and Mobile views will be considered to make the Example page responsive.
- Work to Code Refinement and add required comments.
- Make a report and make complete documentation for the project work and the site.

## Final Evaluation

(5 September - 11 September )

- Mentors evaluate my final work product and documentation.
- Pull request for final work evaluation by mentors and community.

## Myself

I'm Rink Devi, a second-year student at Maharaja Agrasen Institute of Technology(MAIT), Delhi, pursuing BTech in Information Technology and Engineering.

I am skilled with DSA, problem-Solving and Full Stack Web Development, and make contributions in Open Source to learn something new and interesting with every contribution or commit I make.

I have worked on various projects which majorly involve Web Development and UI/UX designing using HTML, CSS, and most of the JavaScript libraries.

Something new that attracts me is Machine Learning and AI and would love to know how using AI and ML we can solve real-time problems.

## Motivation

The reason for choosing The Processing Foundation is my passion for Web Technologies and Programming, and my enthusiasm for Open Source. The Processing Foundation is a combination of Both and thus appeals to me a lot. I have been learning Web Development for several months and have been contributing to Open Source to learn more and new every time. The other factor which motivated me towards The Processing Foundation is the Foundation's mission to promote software literacy within the visual arts, and visual literacy within technology-related fields, making the community stand out and really helpful to the technology world.

I read the documentation and the codebase inside the projects, which helped me understand them effectively. I look forward to learning and contributing more to The Processing Foundation projects.

After GSoC also I would love to stay in touch with The Processing Foundation and keep on making contributions on GitHub.

## Contributions in The Processing Foundation:-

- Translated hindi typos([#1144](#))
- Submitted my PR for the asterisk and the logo([#1116](#) and [#1115](#))
- Found issue on reference page layout of listing([#1168](#))
- Found issue on the translation of the subpages of the website([#1175](#))