Carlos Flores

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My name is Carlos Flores, I am an upperclassman in the Computer Science department at Kean University. This summer I conducted research under Dr. Ching-Yu Huang’s direction along with Rishbh Rhana, and Santiago Roldan; funded through a STEMPact grant.

**Overview of your work:**

I worked on the JavaScript functions for our STEMPact web application project, the JavaScript functions I provided allow for image manipulation and processing. The first couple of weeks I was working with an html element called canvas. The canvas element is used to draw graphics on to a webpage, the canvas is where a user’s image will be loaded and where the user will be able to perform the image processing functions. s

My hope is to continue research in the fall 2017 semester and add more functionality and features for users of the web app.

**Working Environment:**

I worked in a macOS environment for this project. Throughout the course of the project the team and I tried a few different approaches and strategies. This resulted in using a few different languages; ultimately we ended up using python, JavaScript, html, and CSS. For our database we used MongoDB, a non-relational database, we also used Django for the back end.

**Functions/diagram:**

**Feedback about STEMPact Program:**

I believe that the STEMPact program is a wonderful opportunity and I am glad that I was able to be a part of it this summer. The experience this program has provided me with has been invaluable. Getting paid to research new technologies has been a great opportunity for me. Instead of having to find a part-time job unrelated to my academic studies, I have been able to earn an income while increasing my skill set. I think It is important to empower students in this way, the STEMPact program allows students to improve themselves.

**Future work:**

For the future I think it would be great to implement machine learning features to our web application. Perhaps there will be opportunity to predict certain features for users of the web application. Machine learning features would definitely be a challenge worth exploring. In the future a student with a strong mathematics background can help design machine learning algorithms. It is important to push ourselves to strive for excellence. Even if the machine learning approach does not succeed, it is worth a try. It is important to not only succeed but also fail. There is so much we can learn from even exploring the avenue of machine learning.

**Conclusion:**

I learned a lot these past few weeks, I have not had much experience with web programming. In the past I have only made a couple of static websites. It was a wonderful learning experience to be able to create a website with a multitude of different web technologies and be able to connect it to a backend database. I also enjoyed collaborating with my fellow student researchers. It is always a pleasure to be able to come together and deliver a working project in the end. It is important to be able to work in a group together where people can complement each other’s strengths.

**Screenshots:**



