1. Goals

The goal for my project was to make the initial exploration of study abroad programs for the academic year easier for Yale students. I wanted it to have a component that allows users to find where students with similar interests as them went abroad and also include a visual representation of these places. Thus, I created a chord graph that related students’ majors to the country they visited when studying abroad. In addition, I created a search function that displays photos from Flickr using the tag ‘studyabroad’ which allows the user to type a specific place in the search bar at the bottom of the page.

Before I decided to go abroad, I was overwhelmed by the amount of factors and possibilities I needed to think about. Starting the search for a program felt daunting and a commitment in itself. So, the main purpose of this project was to help students narrow down their search from the vast study abroad locations in a playful way. Therefore, when students visit the Yale’s study abroad website, they will be able to find more information about a specific study abroad program, facilitating the decision-making process and getting them excited to study abroad for a semester.
2. Student Data

I was only able to gather data from 63 Yale students who had gone abroad during their academic year. I had facts such as the year, term, location and name of their program, in addition to some personal information like gender, graduation year, and major. By connecting students’ majors with the different countries, I was able to provide the most interesting relationships. There were 30 unique countries and 29 distinctive majors. I wish I had been able to gather more students’ data in order to visualize the clearly defined trends better. Additional data would also allow for more overlap between accompanying information like city and in the future supplementary information pertaining to the specific programs could also be included.

3. Data Visualization

While 63 students aren’t enough to identify trends, it still provided a lot of data points without much overlap. I chose a chord diagram in order to highlight the diversity of majors to countries. I wanted people to know that while some programs are more common for some majors because of classes, it doesn’t have to be a limiting factor. However, 63 crossing relationships can be hard to analyze and visualize. Thus, I implemented a hover feature. When you hover over an area, whether a country or major, it only shows the relationships between the two factors being considered. This added a playful element to revealing these relationships, engaging the user to explore the possibilities.
4. API

The best way to get a taste of a place is through pictures. The photos that appeared on Google seemed too impersonal and commercial and I wanted to provide people’s personal photos. I turned to social media APIs since I would also be able to filter the pictures to include a study abroad related tag so the viewers could imagine themselves taking these pictures, immersed in the culture of the country. I first tried Instagram’s API, but I mainly searched through a specific user’s own photos and found restrictions on logging into their website. It also meant having my website verified (which would take a few weeks) in order to have access to the public’s Instagram photos. I looked at Facebook’s API next but it mainly concentrated on the logged in user’s data. Finally, I chose Flickr’s API. It was extremely easy to use and had many benefits in the end. The user didn’t have to log in anywhere before viewing the photos, the photos were high quality due to Flickr’s user base, and it had tags and locations for photos. Therefore, I added a search bar at the bottom of the page for people to search the location they were inquiring and also made the country labels of the data clickable. I was able to use the API first to translate a location typed into the search bar or clicked on into place ids that match the location. Then I used the API again to search for photos with the tag ‘studyabroad’ and the place ids that correlate with the user’s search. Unfortunately, not all the countries that students have chosen have study abroad photos to display. In addition, I don’t have any information about when or why the photos were taken, nor their personal information (age or program). However, I was pleasantly surprised with the quality and variety of photos that appear for most countries.
5. Technology
I hosted my website with Heroku. I used PostgreSQL to easily store and search my data since it was a component that Heroku provided. I used the D3 JavaScript library for my data visualization since they had functions I could use to more easily create a chord diagram. I coded in HTML, CSS, JavaScript, and PHP.

6. Feedback
People mainly wanted more information about the data provided. More specifically, people wanted to know how many students were surveyed and what the data represented. People felt the hover feature made exploring the data fun and easy to read. In addition, they wondered why photos for certain countries didn’t appear.

7. Possible Expansions
I structured my code so it’s easy to add more data from Yale’s database, or from another school or even a mix. As more students go abroad, it’d be interesting to see trends throughout the years, since more data will be included. With more data, the chord diagram’s relationships could be customizable depending on the user’s interests. In addition, the website could become more robust and interactive if users could input their own data once they return from a program abroad and share it. These returning students could add photos to the current archive or a review of their program. I could also add more information about the countries such as important holidays celebrated, languages, typical food, and relevant cultural facts. It
is important to point out that Yale’s study abroad website is quite robust and has a lot of information about specific programs. Therefore, I concentrated on the step before, helping the students make the initial exploration of which countries they would be interested in visiting and where their study abroad experience would be most enriching personally and academically.