

1. Data Set Sources

(Henry Hall) One of the data sets is the Google Public Data Explorer. It was launched in 2010. The main advantage of this data set is that it allows users to access other public data sets like the World Bank, U.S. bureau of Labor Statistics and U.S. Bureau, OECD, and IMF. You can deploy this data visually with line graphs, bar graphs, maps and bubble charts. These can then be shared via links or being embedded in a website.

(Asa Dixon) The Yelp dataset keeps track of user reviews, user feedback, and the amount of people and businesses using your application. This has many uses for seeing trends in consumer spending and public interests in certain businesses. You can display this data in a bar graph.

(Jon Lair)

<https://www.kaggle.com/prachi13/customer-analytics>

This dataset is regarding e-commerce shipping, it contains information about customers that are placing online orders for various electronic goods. Additionally it has detailed information regarding how customers interact with certain products, and the shipping and transportation process of those products

(Eric Yang) Data.gov has all of the government's public data available for free. Information on the climate, agriculture, U.S energy, Local government information, maritime, and public health are all available. Everything in data.gov follows the Project Open Data Schema (Title, Description, Tags, Last Update, Publisher, Contact Name, etc.).

(Saad El Refai) Another data set is Kaggle.com, which looks at U.S pollution, namely Nitrogen Dioxide, Sulphur Dioxide, Carbon Monoxide, and Ozone. The data is pulled during the time period of 2000 - 2016. The data is organized by states, counties, type of pollution, and amount of pollution.

2. Customers

(Henry Hall) Our customers would be investors, venture capitalists, and politicians. It includes many of the other listed data sets, and is probably the most comprehensive for most topics. This information can be compiled to show data on a large number of topics. Many different projects can use the Google Public Data Explorer.

(Asa Dixon) The Yelp Data set could also be very useful for venture capitalists and investors, but also anyone with a public product. Every Business that works directly with the public could benefit from knowing the public perception of their business, as well as seeing what is lacking in competitors or their strengths. This Data set has many uses commercially.

(Jon Lair)

This dataset can be utilized through multiple perspectives. Customers that want to analyze the process of online marketing, along with information regarding the customers that buy the

products and how they would like to interact with that information. Additionally customers that are inquiring about more information of shipping and product logistics can use the information to analyze the process.

(Eric Yang) Data.gov can be used by civil engineers, local government officials, environmentalists and anyone interested in general problems on a large scale. U.S. energy, for example, has many applications for seeing what type of energy people use, as well as what the highest consumption of energy is. Also, maritime information of vessel movement and fishing is available.

(Saad El Refai) The pollution data found in kaggle is for the general public, as well as volunteer groups and agencies. Anyone trying to track pollution or combat pollution from the specific pollutants mentioned can use

3. Problem to be Solved

(Henry Hall) I propose a project to track and tackle inflation. Inflation is a tax on the poor population who earns a wage that does not grow with inflation. The wealthy have most of their wealth in businesses, stocks, and generally a low percentage of cash reserves, so inflation does not affect them to the same extent as the less well off demographics in the U.S.

(Asa Dixon) I propose a project on loneliness awareness. This site is to aid people who feel isolated and provides them an outlet to discuss with other people about their issues.

(Jon Lair)

This project is especially pertinent in our modern era where Covid-19 has made online shopping a necessity for certain parts of the population along with the various issues with our overall shipping logistics. Worldwide shipping procedures impact each and every person, when something goes wrong in just one area such as a major port like California, it can have a devastating impact on the global scale for transportation.

(Eric Yang) I propose a project to combat ocean pollution and overfishing. Ocean pollution and overfishing are causing fish and other sea creatures serious population decline and potential extinction. Fish accounts for a significant proportion of the world's food consumption. Exhausting this resource will harm the world. We can use the maritime information in Data.gov to track historical spots of overfishing, and use that information to combat Overfishing.

4. Product vision

(Henry Hall) My product vision is a tool to track inflation, what policies cause inflation, and who is causing inflation, so the general public can know who is lowering their buying power, and creating a greater inequality of wealth in the United States. Using this information, Voters can vote for politicians and administrators who back policies that will lower inflation or flatten it

out, to help the majority of Americans who earn a wage or salary. Taking the power back from corrupt officials and bad policy decisions is of critical importance to your wallet.

(Saad El Refai) Project Clean Air is for the general public, as well as volunteer groups and agencies, but also all encompassing for anyone who's concerned with their local air quality, and the potential impacts that pollution can have on their health. Project Clean Air will help visualize and bring awareness to the issue of pollution, as well as direct people to support options. Knowledge is power, and with more awareness of this critical issue it will help spread motivation to address the issue. The major features would include a region search to see specific areas of the US and the amount of pollution in those areas, as well as a local search to see the pollution levels of the customer's area. Additionally the product will allow the customer to see the change in pollution over time in those areas, and how they can contribute to helping solve the problem.

(Asa Dixon) My product vision is to make a site for awareness of loneliness. It will be used as a resource for people who want to help as well as those who are lonely. It will allow individuals to chat and meet with individuals who face similar problems as them. This site will also have medical resources and articles on the effects of loneliness, as well as medical articles on the effects of loneliness to understand the real harm social creatures like humans face from isolation. Once the problem has been identified, this site will help consumers come up with a game plan to combat their loneliness. Whether that is finding people, accepting and loving solitude, and understanding what healthy types of relationships are like. Even in a friendship, marriage, or romantic relationship, people can feel isolated and alone if they have really low quality relationships, which many do.

(Jon Lair)

Our product vision is to help streamline the process of e-commerce and shipping, as well as provide transparency for the overall procedure. This information is especially pertinent in our modern era where covid-19 has made online shopping a necessity for certain parts of the population along with the various issues with our overall shipping logistics. Customers of this product would be e-commerce business owners along with anyone else involved in the whole process of online shopping such as the transportation, and handling of the e-commerce. The key features of this product would be a detailed analysis of the customers to product interaction, offering a visualization of how certain populations of customers prefer and rate specific products, and their purchasing habits. Additionally, the product offers insight on the challenges and the processes of the overall online shipping and transportation experience.

(Eric Yang) My product vision is a product that will help combat overfishing in the United States. These fish are important for Biodiversity, food chain stability within the biome, and feeding many people in the U.S. Consumers of this product could get a real understanding of the issue, and given the facts available, advocate for realistic solutions to combat this serious issue.

5. Identify the major features of each of the proposed projects

(Henry Hall) The major features of this product is to provide data on years when inflation was increasing, cross referencing that information with world events and policy decisions that caused the inflation. In addition to a historical archive, this product will continue to monitor current events to educate the public about what is currently happening regarding inflation, the who, what, why, when, and how. Users will be able to share this information easily on other sites, and sign up for notifications on current legislation, and the current state of inflation. It is an educational tool that could also be used for future reference to understand what works and what doesn't work to combat inflation, as well as the repercussions of inflation.

(Asa Dixon) Social aspect. Users can make accounts, view medical journals, articles, and other media about the topic. Users can connect with each other, find people with common interests, and learn about healthy relationships from a scientific standpoint. For example, the harm of parasocial relationships. Something many struggle with in the age of the internet. This site can provide an outlet to discuss the toxicity of relationships today.

(Jon Lair)

The key features of this product would be a detailed analysis of the customers to product interaction, offering a visualization of how certain populations of customers prefer and rate specific products, and their purchasing habits. Additionally, the product offers insight on the challenges and the processes of the overall online shipping and transportation experience. The project will also include an interactive timeline that details and shows milestones in the product to customer process, and what steps are needed to reach those milestones.

(Eric Yang) The major features of this product will be viewing graphs of historical fishing spots through the years, policies to combat fishing, as well as fish populations and other environmental effects of fishing during the same time period. Users can share this data, and discuss potential solutions among themselves. Additionally, this will contain a list of local and federal officials to contact to let them know this is an issue the public cares about, and wants to see change before we over fish and lose a necessary resource that feeds a large population of the world.

(Saad El Refai) Local search: Lets you know the pollution levels of your current location. Region search: Allows you to get a measurement of the pollution in a specific region. This feature also allows you to filter based on which type of pollution you want to see such as N02, CO, and O3 pollution. Pollution over time: This feature will allow users to view pollution records or previous years and make a comparison to what they currently are today. Users will also have the ability to track a specific area's pollution and see if the progress is getting better or worse in those areas. Contribution: This feature can take information of the area's pollution and offer solutions on how to possibly lower the area's levels. The purpose of this is to give normal people ideas of what the problem is in their areas, how to pinpoint it and potential solutions they can find to resolve their pollution issue. Impact: This feature will gather information on pollution in a specific area and give you info on why it is harmful. It lets users know if the air is harmful to breath or if it is bad for the environment for example.