Project Component 4

Tree Donation Tracker

Group Members:

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Climate change is probably the biggest threat to humanity in today's day and age. "2015-2019 were the five warmest years on record while 2010-2019 was the warmest decade on record"(un.org). Rising temperatures cause the ice caps to melt and water levels to rise. Global warming also causes droughts which "Of the top 10 disasters, droughts proved to be the deadliest hazard during the period, causing 650,000 deaths, followed by storms that led to 577,232 deaths; floods, which took 58.700 lives; and extreme temperature events, during which 55,736 died"(un.org). Even worse, droughts cause desertification, which "is the degradation of land in arid, semi-arid and dry sub-humid areas. It is caused primarily by human activities and climatic variations"(un.org). The scariest part is we don't have a good solution to it, and the things we can do to stop it people aren't taking as seriously as they should. The carbon emissions created by burning fossil fuels are the main cause of climate change. The US Energy Information Administration says that coal, natural gas, and petroleum make up 60% of the electricity generation in America. So a lot of people who think they're being environmentally friendly by using electric machines are still causing the same amount of carbon emissions to be let loose. While great strides have been taken in making society greener, it isn't nearly enough to stop climate change or even slow it down to a manageable rate. According to the Arbor Day

Foundation, “Whether you plant trees around your home and property, in your community, or in our national forests, they help fight climate change”(arborday.org). Many nonprofit organizations plant trees in deforested areas and rely on donations from the public to fund their expenditures.

Our project is a tree planting tracker where whenever you donate to a nonprofit tree planting company, such as the Arbor Day Foundation it tells you where and what kind of trees were planted with your money. According to a blogger at Amplify, “The most successful fundraisers know they need to show donors the impact of every donation to connect with their base and raise more money”(Mike Montalto). Over twenty million was donated to the Arbor Day foundation for the TeamTrees project. If this application could increase donations by just five percent, then that’s another million trees planted. Now imagine if this application increased donations of all tree planting projects by five percent. That would be millions more trees planted worldwide year after year. Instead of just seeing the money disappear from your bank account and hoping the nonprofit used it in a good way, you’ll know exactly how your donation helped the world. People will have much more of a sense that they made a difference if they can see how their donations are being used. Anything that causes more trees to be planted is doing a major service to humanity because “As trees grow, they help stop climate change by removing carbon dioxide from the air, storing carbon in the trees and soil, and releasing oxygen into the atmosphere. Trees provide many benefits to us, every day. They offer cooling shade, block cold winter winds, attract birds and wildlife, purify our air, prevent soil erosion, clean our water, and add grace and beauty to our homes and communities”(arborday.org). This is why our project will be helping society direct funds toward projects that benefit everyone.

Planning:

We will have about a month after project component 4 is due to complete the project, so we're splitting the timeline up into four one week periods. The different levels of our project are described below.

Layer 1/Functional Minimum: A platform where the user can put some input and get some fixed information from a website. The websites include Arbor Day Foundation, One Tree Planted, and American Forests. This information will include where they have recently planted trees and where they will plant trees in the future. The program will print a numbered list of websites to choose from and the user will enter the number of what website they want information from. The program will then scrape the data from the website and present it as a table.

Layer2/Low Target: A platform where the user can put in some input and then decide what information they want from the website. Instead of having the program print a set table for each website, the user will be able to specify what information from the table they want to be presented. Thus eliminating irrelevant information from being printed. The different information can include where they have recently planted trees, where they will plant trees in the future, projects they're currently working on, and other specific information from the website.

Layer 3/Desirable Target: A platform where the user can put some input and get information from lots of different websites from organizations that plant trees. Instead of having a set list of websites to choose from, the user will be able to input any website from a tree planting organization and get data from it. The program will also be able to tell if the website entered is relevant to tree planting. If it's not then an error is displayed. Also, instead of having the user input information with the keyboard like a command line, this phase will have buttons and display a graphical interface.

Layer 4/High Target: A platform where the user can enter any website they want, and the system will determine whether or not it's a tree planting organization. The system will then give them any information they want from the website. This is very similar to layer 3 except there are no errors and is completely seamless in how it works. This means that the user can freely enter any information and the program determines if it's a relevant input and what information to get.

Schedule:

Week 1, 3/29/22: Research/start project

Week 2, 4/5/22: complete layer 1

Week 3, 4/12/22: complete layer 2

Week 4, 4/19/22: complete layer 3

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