

Phipps Conservatory and Botanical Gardens

Executive Summary

Community Partner

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Background

Phipps Conservatory and Botanical Gardens is a public garden located close to several colleges such as Carnegie Mellon University and University of Pittsburgh. Phipps' goal is to encourage people to make simple changes in their lives and thus contribute to environmental preservation. It plays a part in continuing environmental sustainability through research, shown by the Center for Sustainable Landscapes (CSL) a facility that houses groundbreaking sustainability research and science education programs. The CSL produces all of its own renewable energy and thus presents the community with a standard of sustainability and ways for everyone to contribute to environmental sustainability.

Project Description

Project Opportunity

Our clients discussed in depth the importance of not just providing an engaging experience for the visitor, but also influencing people's attitudes towards sustainability and ultimately effecting a change in their behavior. For the CSL, in particular, it is their goal to influence people to adopt more sustainable lifestyles in their own homes. Specific examples include taking shorter showers to conserve water, taking advantage of natural lighting when possible to reduce energy consumption, and being mindful of their food sources. They have tried to address this goal by investing in a dashboard that shows real-time data though it is designed for scientists and experts instead of the general audience.

Project Vision

The focus of this project is the ongoing challenge to find new ways of engaging visitors on the CSL's performance and sustainability in order to allow them to connect more deeply with the environment. We sought to fulfill this need through a web application that took visitors through an interactive tour of the building. We started by gathering feedback to understand why visitors went to the CSL, what they expected to see and experience, as well as what would make them come again. The visitors include those who come as student groups as well as other people of a variety of age groups and demographics.

Project Outcomes

Our final outcome was a web application that serves as a companion guide to visitors of the Center for Sustainable Landscapes. The app helps increase the amount of accessible information to learn about the space as well as providing deeper interaction. The web page uses HTML, CSS, and JavaScript together to create a platform for a variety of content whether it be text, images, multiple choice questions, or even graphs with live data.

Project Deliverables

The main deliverable to our client is a link to our application (<http://phipps-csl.github.io/>) which is hosted on GitHub and also a link to the GitHub repository which contains all the source code. We will provide a username and password to the GitHub account and to the email we used to create the GitHub account. We will provide technical documentation in addition to our solution as a reference and also for future integration with Phipps's CMS tool called ExpressionEngine. Additionally, we will provide a .zip file containing all the pictures as well as icons we created for the application. Lastly, we will provide the username and password to access Phipps's live-data.

Recommendations

We recommend Phipps bring their ExpressionEngine technical expert on board the project and give them the responsibility of integrating our solution with ExpressionEngine. Additionally, we have a few recommendations of how to further iterate and improve on our application. The first is more gamification such as scavenger hunts, which would allow visitors to engage with the different exhibits in the CSL. Phipps recently got iBeacons and our second suggestion would be to explore how our application can provide different content as visitors approached various exhibits in the CSL. The third suggestion is exploring Google Cardboard and virtual reality technology to allow visitors as they walk through to experience the hidden stories in the CSL. The last suggestion is color schemes that change by season and social media contests, which can provide a slightly different and more personalized visitor experience.

Student Development Team

Jibby Ayo-Ani served as project manager. She is a fourth-year student majoring in Information Systems. She will be working full-time with Capital One and is looking toward a career in software development.

Suvrath Penmetcha was one of the programmers for the project. He is a Junior Information Systems and Statistics major. He worked as an IT Analyst last summer at Johnson and Johnson.

Alex Tsai was the designer. He is a third-year Information Systems and Human-Computer Interaction major with a minor in Design. He will be joining Facebook's Product Design for the upcoming summer.