Project Plan



Volunteer Data Dashboard and Database

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### Section I: Problem Statement

Get Outside Alliance is a nonprofit organization that aims to build advocates for the parks within the Texas Park and Wildlife Department through impactful volunteer opportunities.

Currently, the Get Outside Alliance team is composed of three Houston-based volunteer founders with little expertise, time, and resources to develop tools that provide in-depth data that let them identify and recruit volunteers. Without the tools, the Get Outside Alliance team would not be able to scale and continue to create advocates for the Texas State Park and Wildlife System.

### Section II: Project Mission Statement

The project team’s mission is to develop a resource that can be implemented by the Get Outside Alliance team to increase their outreach and their volunteer recruitment so that the Get Outside Alliance team can focus their efforts on engaging future activists for the Texas State Park system.

The goals for the project are as follows:

* We will create a concise and easy to follow, back-end data workflow.
* Our clients will have access to a practical and easy to use dashboard that’ll allow them to understand where their future volunteers are.

### Section III: Project Objectives

To complete the project and give our clients the best possible product, our project team needs to have the following objectives completed by May 12, 2023. In an ideal world, we could gather data for all 89 State Parks within the Texas State Park system, but the following project objectives are based on the goal of covering all parks within a two-hour radius of the Greater Houston Area.

* Conduct research on how many state parks are within a two-hour drive of the Greater Houston Area to obtain a representative sample of volunteers.
* Gather data on demographics within the two-hour radius of the Greater Houston Area, specifically those that are near state parks to assist in the database maintenance.
* Create documentation for most self-maintaining visualization software for the Get Outside Alliance team to refer to.
* Create and document the processes needed to complete the project.

### Section IV: Project Work Requirements

1. Backend Development
   1. Our client will provide data needs and with a list of parks to put emphasis on.
   2. Our team will pull publicly available sources to start designing a web scraping automation for continuous use.
   3. Our team will design python scripts to create a cloud hosted database that provides demographic information to the client.
   4. Project manager will obtain any website login information needed to add the docker to the website.
   5. The organization will be able to use the database as an internal webpage.
2. User Documentation
   1. The documentation will be an easy-to-follow guide that our client can use to maintain the database after the project.
   2. The project manager will work with the technical lead to go over the user process as the database is being built.
   3. Once the documentation is fully drafted, the project manager will have another team member go over it to make sure it’s easy to follow and understand.

### Section V: Exit Criteria

|  |  |
| --- | --- |
| **Milestones** | **Criteria** |
| Due Dates (Project Plan and Final Project) | The group will consider the exit criteria met once the group does one final read-through and reaches consensus that there are no more edits needed. |
| Backend development prep work done | Backend prep work will be done over a month-long period which will mainly consist of primary source gathering. Once the sources are gathered, we will have a python script that automates the data gathering process and outputs a csv. We will consider these criteria finished once we have the csv with the data from the census website in the teams folder. |
| Backend development | The backend development will take place over a three-week period where we’ll work to create our automations. It’ll start in a sandbox phase while we create specifications and plan out how we want the interface to look. We will consider this phase finished when it meets the requirements of providing data for the set parameters. |

|  |  |
| --- | --- |
| Test Deployment | Most projects will go through a test deployment phase to make sure that everything is working on schedule. Three days before the final project is due, we will schedule a test deployment in order to see how the final database will look for our clients. We will consider this milestone closed out when the test deployment finishes smoothly. |
| Final Documentation | Documentation is necessary for continuity in most projects. Throughout the project, the Project Manager will be creating documentation on how the database works. We will consider this milestone met after we’ve had the group readthrough and agree that no other edits are necessary. |

### Section VI: Work Breakdown Structure

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### Section VII: Milestones

|  |  |
| --- | --- |
| **Milestone** | **Est. Date** |
| Project plan submitted | April 5 |
| List of Sources | April 7 |
| Visualization software decided on | April 12 |
| Data visualization built | April 30 |
| Final documentation completed | May 10 |
| Final presentation due | May 10 |

### Section VIII: Working Schedule

|  |  |  |  |
| --- | --- | --- | --- |
| Task Description | Start Date | End Date | Duration |
| Pre-Back End Development | 3/6/2023 | 4/7/2023 | 32 Days |
| A.1.1 List of State Parks compiled and approved by client | 3/6/2023 | 4/1/2023 | 26 Days |
| A.1.2 Define data sources | 3/6/2023 | 4/7/2023 | 32 Days |
| A.1.3 Write web scraping script | 4/1/2023 | 4/7/2023 | 6 Days |
| Back End Development Started | 4/7/2023 | 4/26/2023 | 19 Days |
| B.1.1 Python data manipulation code | 4/7/2023 | 4/26/2023 | 19 Days |
| B.1.2 Python visuals started | 4/7/2023 | 4/26/2023 | 19 Days |
| B.1.3 Python web app started | 4/7/2023 | 4/26/2023 | 19 Days |
| Cloud Deployment | 4/12/2023 | 4/17/2023 | 5 Days |
| C.1.1 Get login for Get Outside Alliance website | 4/12/2023 | 4/12/2023 | 1 Day |
| C.1.2 Create and deploy server on Google Cloud | 4/17/2023 | 4/17/2023 | 1 Day |
| C.1.3 Create DNS records in subdomain | 4/17/2023 | 4/17/2023 | 1 Day |
| Documentation | 4/21/2023 | 4/25/2023 | 4 Days |
| D.1.1 First draft of user documentation | 4/21/2023 | 4/23/2023 | 2 Days |
| D.1.2 Edit user documentation | 4/23/2023 | 4/25/2023 | 2 Days |

### Section IX: Required Resources

|  |  |  |
| --- | --- | --- |
| **People** | **Contact Information** | **Project Role** |
| Tatiana Uklist | Uklistt1@gator.uhd.edu | Project Manager |
| Tanner Waggoner | Waggonert4@gator.uhd.edu | Project Team Member |
| Sami Eldaw | Elshafieibrs1@gator.uhd.edu | Project Team Member |
| Charaf Lachouric | Lachouric1@gator.uhd.edu | Project Team Member |
| Kevin Maldonado | Maldonadok17@gator.uhd.edu | Project Team Member |
| Spencer Frith | Spencer.frith@gmail.com | Client |
| Joseph Sample | Samplej@uhd.edu | Sponsor |

|  |  |
| --- | --- |
| **Software** | **Purpose** |
| Open Project | This is our primary project management software and where we keep all due dates and milestone tracking. |
| Microsoft Teams | Teams is our file sharing system that allows us to collaborate as a team on documents both individually and simultaneously. |
| Python | Python is the language that we will be scripting all the automations |
| ChatGPT | Project manager used to clean up web scraping code |
| GroupMe | GroupMe is our primary and preferred form of communication as a team. |
| Outlook | Microsoft Outlook is our secondary form of communication with our client and project sponsor. |
| Google Cloud | Google Cloud is our cloud hosting space that will allow us to deploy the project. |

### Section X: Major Contributors

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Linear Responsibility Chart** | | | | | |
| **Task ID** | **Project Contributors** | | | | |
| **Tatiana** | **Sami** | **Tanner** | **Charaf** | **Kevin** |
| A1.1 | P |  |  |  |  |
| A1.2 | P |  |  |  |  |
| A1.3 | P |  |  |  |  |
| B1.1 |  | P | S | P | S |
| B1.2 |  | P | S | P | S |
| B1.3 |  | P | S | P | S |
| C1.1 | P |  |  |  |  |
| C1.2 |  | P |  |  |  |
| C1.3 |  | P |  |  |  |
| D.1.1 | P |  |  |  | S |
| D.1.2 | S |  | P |  | S |

### Section XI: Control System

**Quality Control**

Quality control is an important aspect of every project, especially with one as technical as ours. To ensure that our clients are getting the best product possible, we’ve put into place a system to monitor our results. For example, we have built in test deployment dates to make sure that our product is working to the level that our client expects. We also have multiple team members performing quality assurance tasks so that there is a high level of accountability.

**Change Control**

Change is something that can be initiated by any group member with the project manager acting in a largely non-voting role.

First the team member requests the change in our Wednesday meeting. After the request is heard, the remaining team members vote on adopting the change or not. If a simple majority is not met, the project manager steps in to break the tie.

When requesting a change, the team members are asked to consider the current workload, phase of the project, and the feasibility of meeting our current deadlines with the change.

**Conflict Resolution**

Largely, conflicts will be handled internally. At the beginning of the semester, we had set expectations and controls in place to limit conflict and standardize how it is handled. Conflict should be discussed as a group, with a priority being during our weekly meetings so that there’s no confusion that usually comes with handling conflict over messages.

Like the change controls, if the conflict is over a change to the project, it will be up to the group to vote in the simple majority. If there’s a tie, the project manager is the tie breaking vote. If the group is not able to handle the conflict internally, the project sponsor will become involved.

### SECTION XII: Risk Assessment

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Risk | Probability | Impact | Trigger | Contingency |
| Team member not completing their task | Medium | High | Not completing task by assigned date | Work with team members to finish the assigned task thus to prevent project delays |
| Team member drops the course | Very Low | Medium | Team member drops the course whether planned or due to unforeseen circumstances | Currently we have more than one person working on a task to have better workload distribution. If someone drops the course, the Project Manager will step in to fulfill that role. |
| Risk | Probability | Impact | Trigger | Contingency |
| Insufficient demographic data | Medium | High | Our original parameters do not produce enough data points to use | The team will broaden our parameters to get more available data for the development team. |
| Cloud could “evaporate” | Very Low | Very High | There are difficulties with the cloud that is hosting the dashboard. Or the cloud “ceases to exist” in theory. | Speak to the client about alternative hosting solutions i.e., Tableau Public or PowerBI. Or switch to paid hosting service. |
| Inadequate documentation | Medium | Medium | The documentation is not thoroughly prepared for the client. | Work with client to rework documentation to make it easier to follow and understand. |
| Technical work exceeds deadline | Medium | High | Milestones and deliverables not reached | Additional time will be added to schedule |
| Consensus not reached for dashboard design | Low | Medium | Group is not in consensus on dashboard backend or front-end design | Project Manager will act as tie breaking vote on any blockers that do not reach majority votes on the solution. |
| Client rejects deliverable | Low | Low | Client rejects deliverable or fails to adopt and sign off. | It should not ever get to this point since the client should be able to preview the final product before we finalize it. But we will meet with the client to see what feedback they can provide. Then as a team, we can work to resolve any of their pain points and resubmit. |
| Team knowledge base is out of commission | Medium | Medium – High | Sami, our team knowledge base, gets sick or is temporarily out of commission | We would try and get ahead of this early by having documentation prepared for each step before we get to it. If we must, we will utilize outside resources (website, colleagues) to fill in the knowledge gaps. |
| Loss or corruption of data | Low | Medium | File is deleted, overwritten or there is an unauthorized change | Project documentation and data will be kept in a shared teams drive. Project Manager also has hard copy saved to their desktop weekly. |
| Disruption in organizational operation | Low | Medium | The organization dissolves or becomes inactive. | Continue doing the project. Publish finalized version to a github repository for open-source use and add to our portfolios. |
| State Parks lose funding | Very Low | Medium | The State Park system completely loses funding and cease to exist | This is very unlikely, but as above, we would continue building out the project with the data collected. We will share the product with our clients regardless and publish it to a github repository. |