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Developing a Web Platform to Strategically evolve corporate social responsibility

Author
Bhatnagar, Saumya

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DEVELOPING A WEB PLATFORM TO STRATEGICALLY EVOLVE CORPORATE SOCIAL RESPONSIBILITY

A thesis submitted in partial satisfaction
of the requirements for the degree of

MASTER OF SCIENCE

in

COMPUTER SCIENCE

By

SAUMYA BHATNAGAR

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This Thesis of Saumya Bhatnagar
is approved:

____

Professor Sri Kurniawan,
Chair

____

Professor Luca de Alfaro

____

Professor Alex Pang

____

Tyrus Miller
Vice Provost and Dean of Graduate Studies

ABSTRACT

DEVELOPING A WEB PLATFORM TO STRATEGICALLY EVOLVE CORPORATE SOCIAL RESPONSIBILITY

Saumya Bhatnagar

Corporate Social Responsibility (CSR) has become an integral component of many companies especially technology companies. A huge percentage of technology companies want to engage their employees through corporate social responsibility as well; leading to the evolution of a new kind term- “Employee Community Engagement”. With 80% job seekers preferring to work for companies that are socially responsible and employee engagement reducing the staff turnover, CSR and employee engagement has become something not just preferable, but a need of the hour to affect the bottom line of companies.

The current method of doing CSR and employee engagement for companies is to manage the process manually, using spreadsheets, emails and calls. This process is extremely time consuming, allows companies no analytics and insights into their engagement process. My main contributions include interviewing five companies to find the problems, building a technical solution and implement it with users and finally recording the results and trends.

To create a technology solution for this problem, I interviewed the head of community and government relations for five different companies ranging for 50 to 10,000 employees & analyzed their requirements based on their answers. The top problems were analyzed to be too much work as overhead, no tracking of employee

data, lack of employee engagement, less employee turn out and skill and cause matching.

I built an MVP in core PHP was build to solve these problems first for company heads, nonprofits as well as employee volunteers before moving on to solve for other issues to see if using a technology platform may help solve the problem. A smooth user registration and onboarding was created for each of the user types so that everyone in a company can be engaged easily on the platform, a twitter like networking community was created so that users can interact about their philanthropy, administrators were given traceability regarding the engagement levels of their employees, an opportunity to create events and send out invitations through the portal was allowed, the creation of specific events was allowed for a nonprofit and an opportunity for closed team events for employees was allowed after the creation of the proposal by a nonprofit.

Implementing this saw an increase in engagement of employeesfrom 4% to an average of 25% with a shift in the usage of CSR for team and culture building by the company as well. With increase in usage, requirements for grant management and workplace donations surfaced as well which would be a future leap for the product to become an end to end corporate social responsibility soltuion.

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Finally, I must express my gratitude to my sister; parents and grandparents whose constant support and encouragement throughout the course of my years of my studies helped me reach this point. This would not have been possible without them.

Saumya Bhatnagar

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CHAPTER I: Introduction

Corporate social responsibility (CSR, also called corporate conscience, corporate citizenship or responsible business)[1] is a form of regulation integrated into a business model. CSR policy functions as a self-regulatory mechanism whereby a business monitors and ensures its active compliance with the spirit of the law, ethical standards and national or international norms. With some models, a firm's implementation of CSR goes beyond compliance and engages in "actions that appear to further some social good, beyond the interests of the firm and that which is required by law."

CSR has become an integral component of many companies especially technology companies. A huge percentage of technology companies want to engage their employees through corporate social responsibility as well; leading to the evolution of a new kind term- “Employee Community Engagement”. With 80% job seekers preferring to work for companies that are socially responsible and employee engagement reducing the staff turnover, CSR and employee engagement has become something not just preferable, but a need of the hour to affect the bottom line of companies.

The current solution to the problem of doing CSR and employee engagement for companies is to manage the process manually, using spreadsheets, emails and calls. This process is extremely time consuming, allows companies no analytics and insights into their engagement process, leads to limited reach and thus causes minimal employee engagement and also causes nonprofits to suffer due to a good rating mechanism and vetting criterion.

The process of doing Corporate Social Responsibility for companies globally is to verbally or by email find the causes the employees of the companies are interested in. At times, this gets too cumbersome so many companies skip this step altogether. After this they manually search online for nonprofits doing work in similar causes, they also go through a batch of proposals sent via email regarding donating to their particular charity and the kind of event they will create. They then select the nonprofits they are interested in manually and then set to the task of going through the IRS database to see the authenticity of the nonprofit.

Once this is done, the nonprofit creates an event invitation (in the form of flyers, emails, etc), which the HR then sends via email to all employees and asks for RSVP's. They send manual regular reminders and try to get as much turn out as possible. They then manually attend each event to see number of people who attended and then count their volunteering hours. They then compile this data into a report for their CSR reporting and tax auditing purposes. This process is so cumbersome that HR managers are suffering from months of backlog and the companies are suffering from tens and thousands of dollars in overhead.

To solve this problem, an online platform was developed to strategically improve corporate social responsibility. In subsequent sections, the process of requirements collection, feature addition strategy, development and usability survey of the project to see if there exists an increase in the employee engagement if companies are delivered the online portal.

CHAPTER II: Background and Requirement Analysis

For development of a product that helped the companies with their needs, a detailed requirement analysis was done on the basis of which the product was then developed. 5 companies of various employee sizes and revenues were looked into. I had to start with finding out about who the stakeholders are in each of the companies are and then go ahead with my interviews. For the sake of convenience, I shall define certain terms, which were regularly used, and were later incorporated into the product as well to give a holistic end-to-end solution for the problems of the companies.

In the Corporate Responsibility Neighborhood

Corporate Social Responsibility is defined as situations where the firm goes beyond compliance and engages in 'actions that appear to further some social good, beyond the interests of the firm and that which is required by law[2][11]. It is a practice largely adopted by companies in the United States for publicity and affects the bottom line of the company. However, Corporate Social Responsibility (CSR) is now increasingly being viewed in conjunction to various other advantages. A background of some of these advantages is supplied below.

Corporate Citizenship

Corporate citizenship involves the "social responsibility of businesses and the extent to which they meet legal, ethical and economic responsibilities, as established by shareholders. The goal is to produce higher standards of living and quality of life for the communities that surround them and still maintain profitability for stakeholders". [3]

In today's economy, there is a growing pressure on corporations to be good corporate citizens. Besides being revenue generating and providing people with employment, they are still expected to do more. They're expected to give back to the community and focus on making the society a better place to live in. Companies now have separate people who have a job profile of taking care of only community relations. In fact, in companies like India, China, Brazil and European Union, giving back to the community is mandated and the companies have to by law mention their community relations in their tax reports.

Employee Community Engagement

Employee Community Engagement is a kind of corporate social responsibility (CSR) for engaging employees, including its impact on their motivation, identity, and sense of meaning and purpose. It explores three different ways that companies engage their employees through CSR: a transactional approach, where programs are undertaken to meet the needs of employees who want to take part in the CSR efforts of a company; a relational approach, based on a psychological contract that emphasizes social responsibility; and a developmental approach, which aims to activate social responsibility in a company and to develop its employees to be responsible corporate citizens. [3]

Advantages of Employee Engagement

The advantages of employee community engagement are as follows:

- Employees feel pride in their company with respect to the good, philanthropic work they are doing
- Employee retention increases and employees find it harder to leave a company doing well in the society
- Employee Community engagement improves team building among the employees considering all the employees get together and go out to do good
- Employee productivity increases because they feel they have contributed to the society by means of their company

Employee Volunteerism

Employee volunteerism is an up and coming practice in the world of global corporate citizenship. It consists of employees going for community building events on the time and expense of the company and contributing. This has a positive impact on the morale of the employee and also helps them learn new skills, which may be applicable back at work. This also helps in getting the word about the company out among the community which increases the respect people have for the company which in turn helps in increasing the trust for the companies among its consumers.

Employee Donations

A new trend that has seen a sudden rise in the past two years is employee donations. This is a little different than the traditional donations done. Here, the employees are given the option to donate to nonprofits the company is associated with. The company incentivizes its employee to donate to the charities they are associated with, and the companies use this data as a part of its publicly available corporate social responsibility report which they release either annually or semi annually to use as an additional publicity channel.

Corporate Giving

Corporate giving in the traditional sense is companies donating money or in-kind product to charities of their choice. However, the new twist in the scenario is the beginning of company grants, which are similar to government grants. Nonprofits apply for a grant; company executives go through each of the proposals presented to them and decide which nonprofit the grant should go to. Microsoft calls their grants as the Microsoft Awards and many other companies have started similar grant giving services as a part of their corporate responsibility programs. This enables companies to be able to disburse their money to the best opportunities and make maximum impact.

Volunteer Time Off

Volunteer time off (popularly referred to as VTO) is the most common way of incentivizing employees to contribute more through the company community building exercises. Volunteer time off allows employees some time off for employees for every hour they put into volunteering through the company community engagement programs. The ratio varies from company to company for amount of time given off to employees for every hour of volunteering. This incentivizes employees to get on there are contribute on site instead of merely through donations. However, some companies have an incentivizing policy for employee donations as well.

Skill Matching

Another focus of volunteering is matching their employees to volunteering events that require the same skill as they have. The ideology behind this is that the employees would feel a great contribution was made to the community if their skills were utilized for a project. This would also help charities solve specific problems in the route to impact. The company CSR resource does this matching for all the charities it is associated with based on the proposal provided to it by these nonprofits.

Requirements Interview

The head of community and government relations for five different companies ranging for 50 to 10,000 employees were interviewed and each of their requirements were analyzed based on their answers. A specific format of questions was followed in order to maintain a common benchmark for ease of deriving the product requirements from their answers. The same questions were asked of some nonprofits as well in order to be able to create an easy end-to-end solution. The questions are listed as follows:

1. Is doing CSR your primary job profile?
2. What are your main objectives while doing corporate social responsibility?
3. What does corporate social responsibility entail in your company?
4. How do you currently do corporate social responsibility?
5. What are the biggest bottlenecks you face?
6. What takes you the maximum time to accomplish?
7. Is there anything you despise doing in process?
8. What work never gets done by its deadline?
9. Who else, besides yourself, is affected by this problem?
10. If you had extra time, what are the things with respect to CSR you would have liked to do?
11. Have you tried any other method to improve the process before? If not, why?

I purposely did not ask feature related questions as that drew out a lot on not feasible and at times pure bizarre answers.

Requirements Interview

Each of the 5 companies' CSR executives was asked to answer the above-mentioned questions. Each of them had diverse answers however; each of their answers had a great amount of common ground to work with. The nonprofits also provided greatly overlapping answers.

Companies

The companies are mentioned in increasing order of employee size. Company A (10), Company B (50), Company C (500), Company D (2600), Company E (10,000). Each of their CSR representatives who did the major chunk of the community building work was interviewed and their answers were recorded. The answers are as follows.

Company A

The representative I spoke with said, her primary role was not to manage corporate social responsibility. Her main role was that of an HR manager and she was responsible primarily for hiring and firing. She said her main objective to hold these social responsibility events was to hire better. She encouraged her employees to bring friends to these events and it became a doing community good combined with fun event and she would get to meet new people through current hires who would get interested in the company and could be great potential hires. The byproduct of the exercise was to get a good name of the company out in the community at such an early stage that even attracted better investors their way for the future. Corporate responsibility was organizing an in kind donation event as they couldn't afford to put in much money. However, it attracted a lot of people willing to donate their belonging. The event would usually be held on a weekend. The biggest problem they suffered from is being bale to track people at the events. How many people came, for how long and what did they donate. Employee recognition seemed to be an important part of their CSR culture. The maximum time was taken by trying to understand and decide what kind of events they should organize and tracking every employee's volunteering record; it was the task she despised the most. She said that creating a report for the CEO to see and assess is the work that always gets late, as she's always busy consolidating information. She said the CEO gets very agitated, as it's a unique way of hiring for him and he's missing out on an opportunity to find more people to add to his hiring pipeline. She said that if she had extra time, she would love to spend more time on more productive events with good nonprofits. The HR manager had stuck to this method of working for a considerable period of time and never thought of changing it.

Company B

Company B is a new and upcoming startup, which has just raised a multimillion-dollar round on investment. When we talked to the CSR manager, the following were the answer she gave. Managing the social responsibility activities was not a part of her primary job. She was actually a part of the operations and office management team. When asked what her main objectives were with respect to doing corporate social responsibility, she said that her main aim was to be able to create a team culture in the companies, which focused on the core values of helping one another as well as the community. She wanted to use corporate social responsibility as a means of developing a positive rapport among team mates as most of the employees in their companies were sales oriented and were always pit against one another. Corporate social responsibility in Company B usually entails a group of people usually form the same team, getting together and going to an event that doesn't require any particular skill, something like a beach cleanup. They also had a great focus on child friendly activities, where they could get their families as well. Currently, social responsibility at Company B was done in the form of multiple cold emails to nonprofits to organize events for them, sending RSVP emails to employees and manually sending reminders again and again till the RSVP did mot meet their turn out rate expectation and then after the event, manually adding all the details into a spreadsheet and returning the impact made, in a sentence to the CEO. The biggest bottlenecks that were faced were to get the employees excited about the event and actually caring to show up and this actually also took the maximum time to accomplish and something she hated the most as well. Getting all the employees to RSVP right before the deadline was something that the office manager struggled with. The office manager said and she would've wanted to spend more time with employees to find out what they are truly interested in. She said she'd tried survey money before, but did not know what to do with all the collected data.

Company C

The Company C CSR Manager did not have this as her primary job profile as well. She is a part of the HR department and the company had divided a subsection of the HR to do CSR as an extra, apart from their regular job as HR managers. She said that Company C is a company that deals with semiconductors, it's a job with a high learning curve because of the state of the art technology, but the engineers tend to plateau in their highly specialized job profile. Because of this, their employee churn is very high and they don't get a lot of young population that wants to be a part of the company. Company C wants to be able to appeal to the youth and decrease the churn by means of social responsibility. As a part of their CSR programs, Company C has multiple parallel programs running, each of which have their own events. Company C does at least 2 volunteering events each month where all the employees are invited. A lot of nonprofits give Company C multiple proposals to do various events related to different causes. But Company C has its set causes over many years and have multiple pre-existing nonprofits. But they always go through the proposals to see if more nonprofits can be added. They manually check the authenticity of each nonprofit and then give them a small token money to run the event and they invite employees to it through a mass email. Since only one mass email is sent for each event, the turn out rate of employees is less that 4%. This makes the programs seem non viable but Company C still does the events. Going through each of the proposals and then returning an answer to them. The HR hates having to go to every event to manually log the time of each employee volunteering. Compiling month's worth of information to present to the head of HR is something that takes a lot of time. The HR is currently 6 months behind. A huge part of the reason for doing CSR is to make the company look good for the millenials. A low turn out rate doesn't seem very inviting. The HR would've wanted to find out what interest the employees of the company and match them to the skill needed by nonprofits. Since there are only so many companies in the United States that work in the semiconductor industry, many nonprofits have specialized needs that Company C can fulfill and employees would like going to as well, but those nonprofits get lost among the heap of proposals. The HR Head had hired a CSR consultant in the beginning of the process, however, the cumulative expenses of the CSR consultant as well the already occurring overhead costs became greater than the department had budget for.

Company D

The CSR Manager of Company D has management of corporate social responsibility as his full time job. His position was VP of Community and Government Relations. His main objectives for doing CSR was to be able to increase the engagement of the employees with the brand of Company D and that they feel pride in their company. He also wanted to get his employees engaged with the brand in a similar manner and hence had a great focus on release CSR Reports once every 2 years. Besides finding nonprofits through proposals and organizing regular events with them, Company D also wants to have similar events with their customers to engage them with the brand. AMN has recently started grant giving to nonprofits and need to do grant management for that as well. Currently everything is being done manually, through spreadsheets. Doing every kind of management through spreadsheets is the biggest bottleneck as it is very hard for one person to manage everything for 3000 employees. There is no way for him to find out about new events they could introduce their employees to. Also, the biggest problem they face is managing grants, especially adhoc grants. Sitting and collecting numbers in order to do the CSR reporting takes the maximum amount of time. That is the reason they release their reports once every 2 years instead of once every year. AMN believes that not being able to manage the problem well has a trickle down effect right to the bottom line. The VP said that he would've liked to spend more time on analyzing and giving volunteer time off. Till now Company D has been solving the problem manually, but are now looking to expand the process.

Company E

The CSR Manager of Company E had her full time job as community and government relations. The main objective of Company E with respect to corporate social responsibility was engaging its employees through skill based matching in the community. They aim to create a good name for Company E as a good corporate citizen while reducing the churn among the employees of the company. Company E usually hires an outside consultant at a high price point to manage the entire skill-matching program. The consultants do it manually as well which results in limited accountability, transparency and no reporting whatsoever. The lack of reporting, analytics and a minimalistic turn out rate among employees is the biggest bottleneck the company suffers from at the moment. Company E would have liked to give its employees volunteer time off, but because the company is so large in terms of employee size, managing the entire work and then introducing it into their custom build payroll system manually would be very hard to do. According to Company E, giving out the grants through the means of an external third party CSR Consultant is the easiest way for them at the moment to manage their day to day corporate social responsibility activities.

Requirements Conclusion

The answers of the companies all belonging to various employee sizes and different industry, had some common overlapping answers. These were the ones for which a solution had to be designed first to make it a one product fits all solutions. Below is a table with problems listed by all the companies, which makes the overlapping answers more visible.

COMPANY /Problem	Not job Profile	Employee Tracking	Employee engagement	Employee Turn Out	Skill-matching	Grant
Company A	Yes	Yes	No	Yes	Yes	No
Company B	Yes	Yes	Yes	Yes	Yes	No
Company C	Yes	Yes	Yes	Yes	Yes	Yes
Company D	No	Yes	Yes	Yes	Yes	Yes
Company E	No	Yes	Yes	Yes	Yes	No

Table 1: Requirements summary

The above problems would be the ones for which a solution would be initially designed for.

CHAPTER III: METHODOLOGY

Top Problems

The top problems identified through the user interviews were as follows:

- Too much work as overhead
- Tracking of employee data
- Employee engagement
- Employee Turn out
- Skill and cause matching

These were the main problems I decided to fashion my solution around and iteratively add improvements by taking the product back to the user.

Overhead

To combat the problem of overhead, I decided to create a networking platform, which everyone can sign up on. Similar to payroll software, everyone; employees, nonprofits and HR's alike put in their own information and it gives them a cumulative result. Also for people with no problem in social responsibility, create a quick running algorithm which tell them that based on their customer profile, what causes should they be a part of for maximum retention among employees and popularization as a brand.

Tracking Data

Through means of the portal, every one including nonprofits and employees are prompted to put in their own data and RSVP's are auto tracked. Anyone who has to get an update about any event happening is scheduled and reminders are auto set.

Employee Engagement

Employee engagement is the biggest is the biggest problem that companies face right now. Having the employees come back to the platform again and again, is a cause of concern. I added constant engagement emails, extreme personalization based on the users skill sets, survey options to add the employee to the selection process and constant updates about events pertaining to their skill and causes they're interested in.

Employee Turn Out

To improve employee turn out, they have to be introduced to events they're interested in. If they have events they like going to and it gets made into a community, the employee turn out can be improved.

Skill & Cause Matching

Matching skills and causes to events within a certain area for the employees can be a daunting task. Hence finding a good way to be able to match the skills and causes is important.

Based on the problems mentioned above, the choice had to be to have a web platform for the companies, as they were unwilling to organize everything on a phone app and any kind of integrations were too hard for them to manage on an internal networking side. Thus the choice was a web platform to organize the social responsibility for a company.

Product Specifications

For the reason of building out a quick product, the choice of platform was core PHP with a MySQL database. I decided to use the conventional LAMP architecture to make a quick prototype to test out. For future benefit, I had a plan laid out to move it to a Laravel framework with a Postgres SQL database. The front end was in HTML/CSS[13] and was catered to be an easy interface using a flat design whose colors were meant to invoke warmth.[14] This was to be done in case of multiple concurrent users or in case of more feature additions.

Database

After deciding on what features were required and designing the data requirements, the database was designed for 3 user types that were decided to be incorporated into the product, a company, the company's employee and a nonprofit. In the database, each of the tables is 3NF normalized. Each of the tables and their columns are described below.

Countries Table

This is the table used to refer to for the countries each user belongs to, where each charity events is being held and where each company is located.

- CountryID – Because all the users are asked for their location, the country id is the Primary Key
- Country Name – Each country name associated with countryID

Attendee_Detail Table

Attendee_detail is a table meant for users who've been invited to attend an event by either their coworkers or their company and keeps track of if they attended it or not

- Attendee_id – this is the primary key and gives out the id of the person who was invited
- Event_id – This is a foreign key that identifies the event to which the user was invited to
- User_id – This is a foreign key depicting the user id of the person who invited the user
- Crt_date – This auto records the date of invitation
- Active_flag – This is a boolean depicting if the user has accepted or RSVP's to the invitation
- Verified- This is a boolean that depicts if the user is a verified user for the particular event

Causes Table

- CausesID – Primary key depicting the id of each cause name
- Cause Name – Each cause name associated with CausesID

Countries Table

- CountryID – Because all the users are asked for their location, the country id is the Primary Key
- Country Name – Each country name associated with countryID

Events Table

This table gives details about the public events that a nonprofit can create for their charitable events.

- EventID – This is primary key depicted the event id of each event created
- Event_name – Event name associated wit each event
- Event_img – name of image uploaded as part of the event
- Event_desc – Description of the event
- Skill_id – Foreign key for the id of the specific skill required for the event
- Skill_desc – Skill description for any additional details to be given about the skill required for the event
- Event_date – Date of the event
- Event_time – Time of the event

- Number of people – This column describes the maximum number of people allowed to RSVP to the event
- Budget – The budget for the nonprofit
- Street_name - This is the column to give the street name of the address where the event is occurring
- City – City name of the event
- State – State where the event is getting held
- Country_id – Id of the country where the event is getting help
- Active_flag – flag describing whether the event is active or still in the duration of occurrence anymore
- Recurring_event: how many times a year from the starting date does this event recur
- Social_Kpi: The key performance indicator you monitor for this event
- Proposal_id: if there is a proposal associated with this event

Follow Table

This table is used to identify the follower connections

- F_Id – The connection id between the follower and the person being followed, this is a primary key.
- User_id – id of the user
- Follower_id – id of the follower

Skills Table

This table lists the skills one could possess

- Skill_ID – The id of the skill which is a primary key
- Skill Name – Each Skill name associated with Skill_ID

Proposal Table

Table which records the proposal details that a nonprofit would send to companies

- Proposal_ID – This is the primary key which gives the proposal's id and is set to auto increment
- Proposal Name – Name set for each proposal
- Company_id – The id of the company the proposal is sent to
- Sdate – start date of the proposed event
- Edate – End date of the proposed event
- Pro_goal – goal of the proposal
- Pro_recepients - who are the recipients of the event
- Pro_size_desc – size of the population you want to affect
- Ripple_effect – ripple effect it might cause
- Objective – objective of the proposal
- Scope_of_work – scope of wok with the project
- Activities – The activities decided for the proposal
- Skills – id's of the skills required for the event
- Budget – the budget of the event

- Time_taken – time taken in days for the project to complete
- Nonprofit_id – id of nonprofit who created the proposal
- Crt_date – auto creation of date when proposal is submitted
- Active_flag – if proposal is active or not
- Status – 0 for not read, 1 for accepted, 2 for rejected

Survey_response Table

- SurveyID – Id for the survey which is being sent
- Name – Name of the survey filling out the survey
- Company – Company name of the person filling the survey out
- Project_id – id of the project for which the survey is being fillied out
- Active_flag – boolean for if the survey is still active

User Table

- UserID – Id of the user which remains the primary key
- User Name – Name of the registered user
- Email – email of the user
- appID – in case they logged in through, Google, Facebook or twitter profiles
- profile_img – Name of profile image uploaded
- City – City name
- Country_id – Id of the country
- Zipcode – the zip code of where they live

- Password – an md5 encrypted password column
- Type – describes the user type, either Volunteer, Company or Nonprofit
- Crt_date – date of creation of the user account
- Active – Boolean for if the user activated his account or not
- Activation_code – activation
- SkillId – id of the skills of the user
- Company_id – id of the company of the user
- C_id – id of the user who added user as co-administrator

Feature Set

There is a different feature set for each of the user types involved with the project. There are 3 user types – Company, Employee/Volunteer & nonprofit.

User Registration & Login

The user registration works with the user filling out a registration form with their company name, email and a password. The user then gets an activation email on their registered email id's where the user gets an activation link, clicking on which activates the users account. This method is applicable for registration and login of all user types ie. volunteers and nonprofits as well.

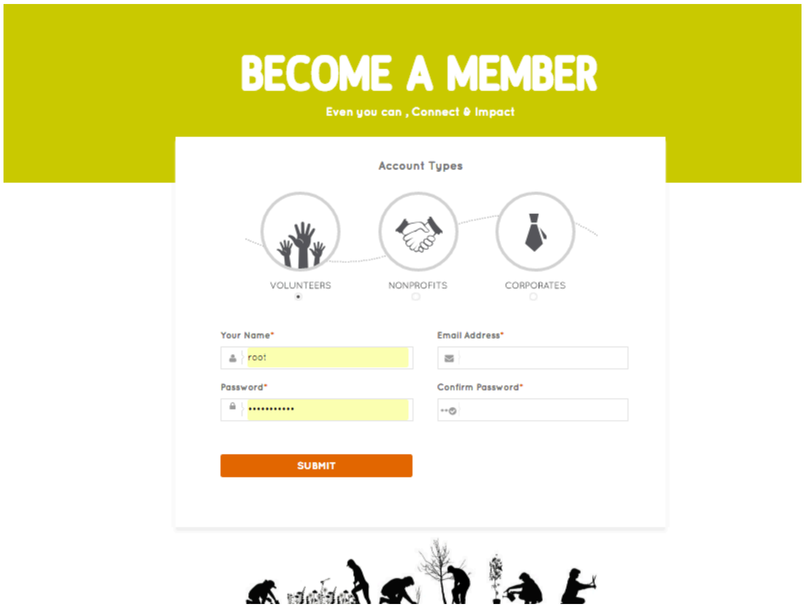

Figure 1: Registration Form

The bValidator was used to make sure there were no errors on the client side of information filling and was used in each of the forms used subsequently throughout the product. The bValidator is a jQuery plug-in for client side form validation. It supports fully customized error messages defined with template and CSS, many validation functions. [5]

After the client side validation is done, a function called get_registration_data was created which took in the name, email, password, user type, creation date of the user and put the active_flag as 0 until the user did not activate the account. The function first checked in the database table of users to see if the email given already existed in the table. If it did, it gave the user an error that the user was already registered, else the function created an activation code by taking a shuffled substring from a list of numbers and alphabets (both uppercase and lowercase) and took 5 alphabets from it as an activation link. We also have an md5 encryption on all links.[6] The function then inserted the activation code in the user table as well. The function then used the php built in mail system sendmail to send an email to the user email address with the activation code.

For each of the emails sent out, there had to be a strict compliance to can-spam act. [7]

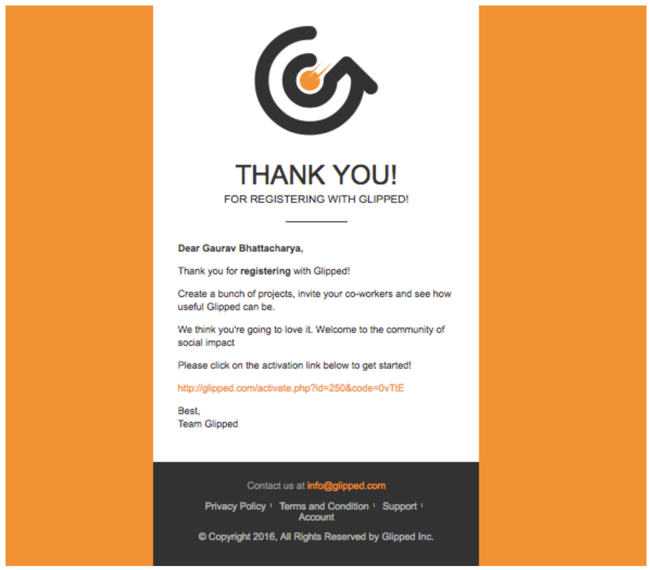

Figure 2: Activation Email

Clicking on the activation link would call the activate_account function, which took in the id and code and if corrected updated the active status of the user from 0 to 1. The user would be redirected to a login link and the user would be able to put in his email and newly created password and access the portal. The SSL/TLS protocols were attached to the product.[8]

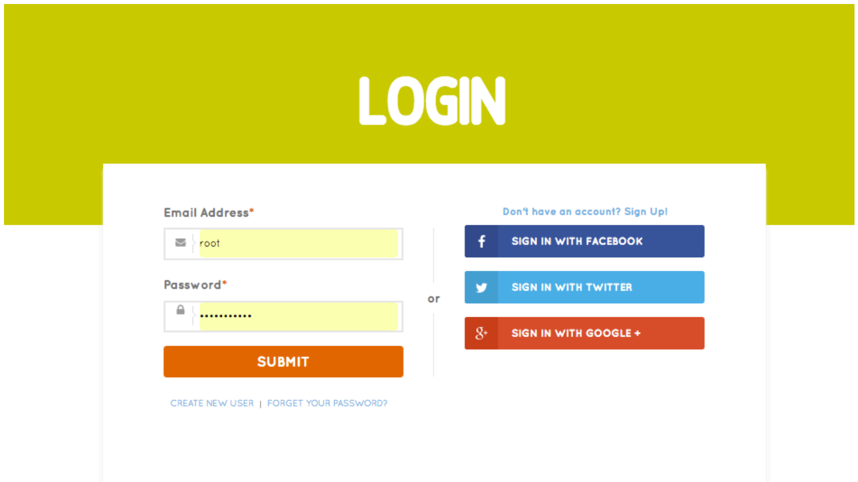

Figure 3: Login Page

The user login also has a similar functionality connected to the same user table in the database. A function check_auth is created which gets the database for a record with the email entered and the password entered. If nothing matches, then the user is prompted for a wrong email and password, however is a record does come up and the email and password match with what is put in, then the session variables are created which are user name, user type and the user id.

Profile & Following

The profile was contains all the details about the user. The user can fill out more details about himself/herself regarding their social responsibility likes and dislikes. Besides company administrator (as shown in the figure), employee volunteers and nonprofits also have similar profiles but with some differences. The profile page looks similar to the Figure 4 and Figure 5 as shown below.

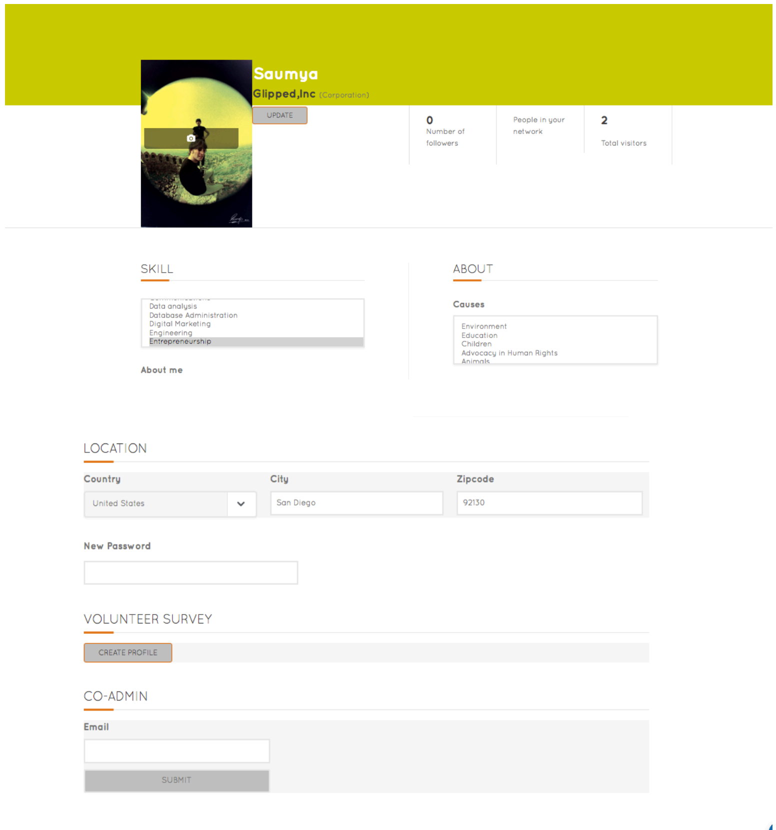

Figure 4: Company Profile

Each image uploaded using the move_uploaded_file function is put into an images folder and linked to in the user table in the database. Similarly, all the other details in the profile can be updates in the profile and subsequently, the changes are made in the database as well. A user class is created which provides methods to derive all the user information.

The profile also has a co-administrator feature in case the company user wishes to have someone else administrator the account as well. This sends an activation link (similar to registration) to the person whose email is added and the user can log into account with the user id of the coadministrator. A function call get_follower_list, which gets all the users that are following the current user, is used.

Onboarding

The company user can then send activation emails to all its employees and create a network ecosystem within the portal. In the company's dashboard, the administrator can upload an excel spreadsheet with the name, emails and Departments of the employees and be able to send activation emails to everyone under the user type of employee volunteers. The administrator can also send reactivation emails to anyone necessary in the same manner.

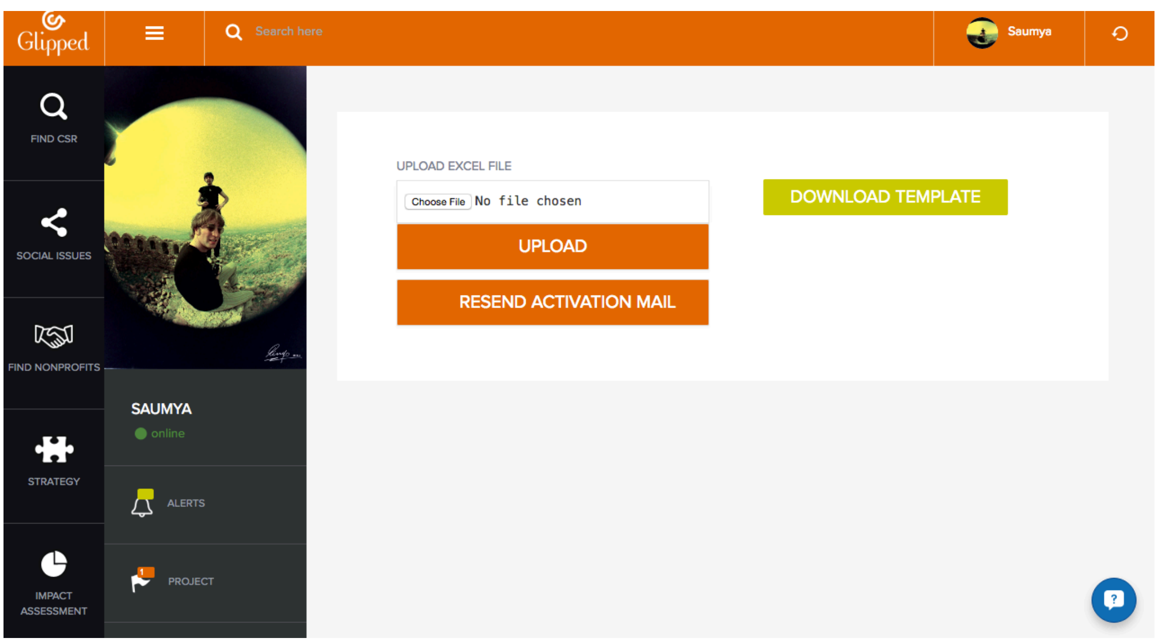

Figure 5: Bulk Onboarding

Using the above, the company administrator can send both activation as well as reactivation emails to its entire network, using just a spreadsheet. To read the excel files, excel_reader2.php, a file from the PHPExcel[9] built in package of PHP was used. A function getBulkRegistration was created for which the spreadsheet of format either xls or xlsx was uploaded. The path extension was analyzed and any other format was not allowed to be uploaded. Similarly, if the uploaded files size was greater that 2MB, it was rejected. The uploaded file names is named on the basis of its creation date and moved to a separate folder. The file is loaded into the excel reader. We call the getHighestrow and getHighestColumn function to get the top most row and column in the loaded sheet. We pre identify the first column for name, the second for email and the third as department. We iterate through the rows and send activation codes and passwords from a shuffled substring of numbers and alphabets to each email. They can activate their account is the same way as registration and activate.php makes their account active and they can log in. Each of the people to whom activation emails get sent to, get their details with activation code and company id they're associate with put in as an employee type. To send reactivation emails, a similar process takes place. When clicked on the button, all the people who're under that particular administrator as c_id, of volunteer type and active_flag as 0, get send another email with their activation link and password by querying it from the database. Acitvate.php activates their account if they click on the link.

People in your Network

As employees activate their accounts, the administrator of the company can see all the people who are collecting as a network.

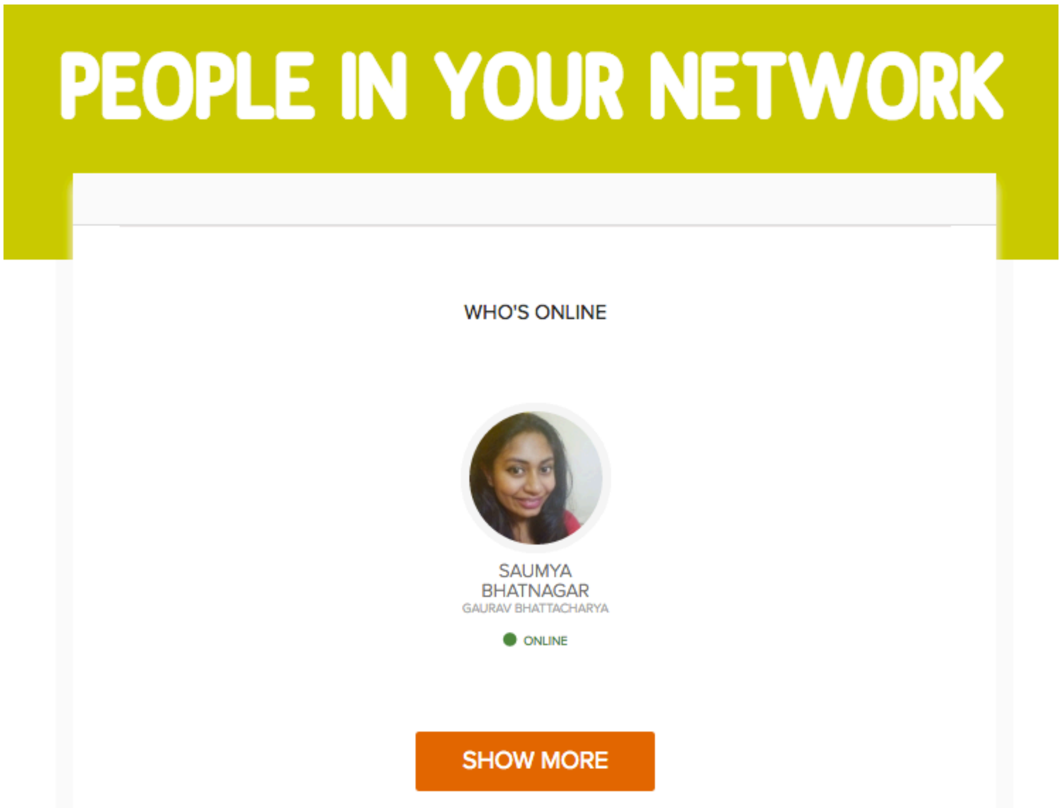

Figure 6: Network

All employees invited by administrator though bulk activation populate as soon as they activate their accounts.

Events and Invites

The events page is where all the public events that are created by nonprofits are listed for companies and employees to see and attend. There are filter criterions based on keywords, city, date and zipcode as well to search for specific events. There are flexible events that could be looed at as well. You can check events based on traditional nature or skill based nature.

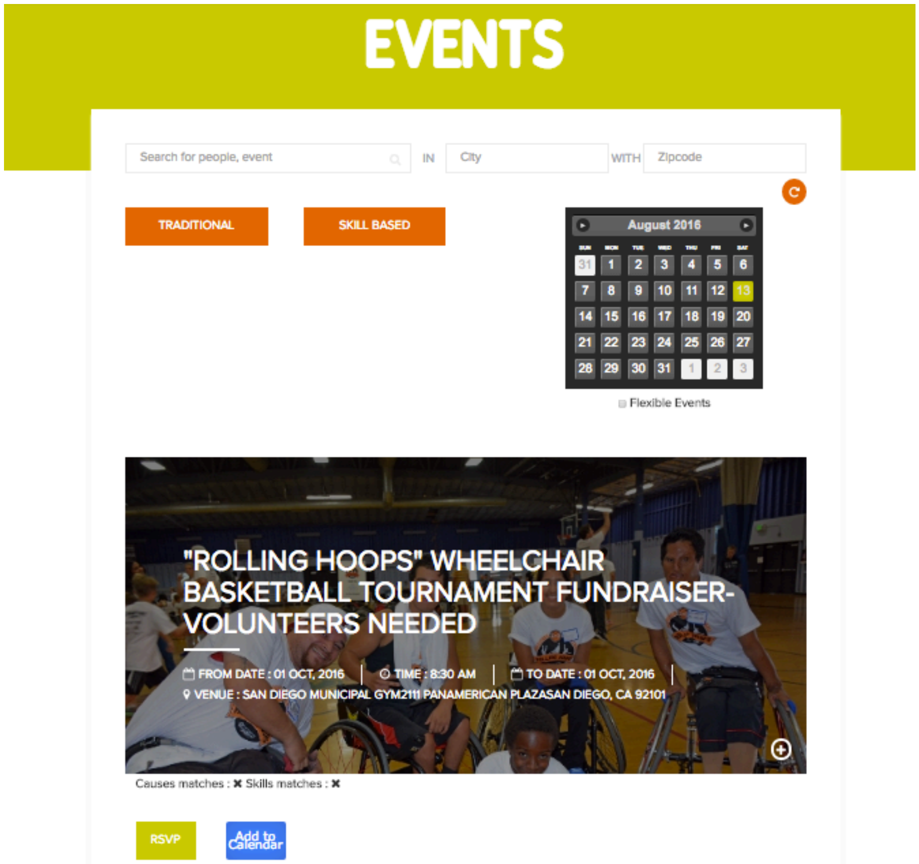

Figure 7: Events

Clicking on traditional button only selects the traditional events from database and skill based only selects skills based. The events can be similarly be displayed based on date by clicking on the calendar. Clicking on RSVP adds user to attendee table in the database for each event. This event list deploys lazy loading[10] using jQuery[12] so that as you scroll to the end, more events display.

One can look at more details of every event by clicking on the more information button as well as invite other coworkers to it. A list of people is displayed within the network of the person is sharing the information using the concept described above. Whoever is selected gets sent an invitation to the event as a display with the event details. That person can then RSVP.

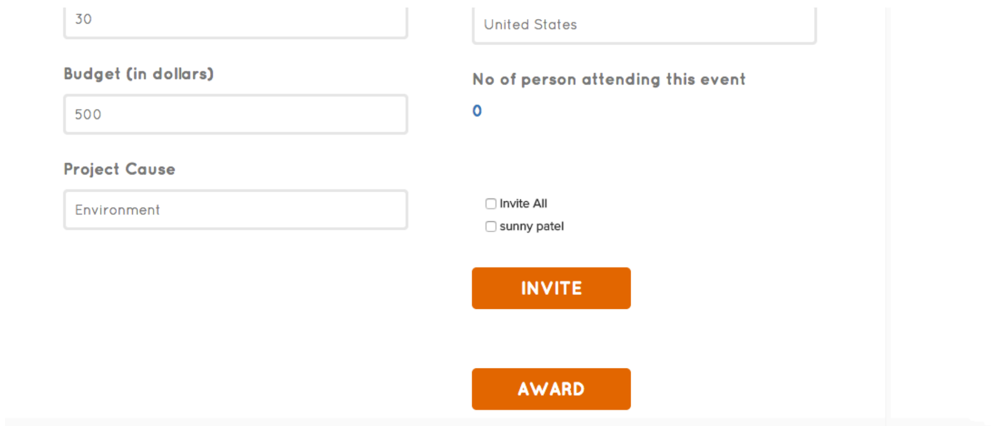

Figure 8: Invitation to event

Surveys & Specific Events

The company administrator is given a choice to select the causes that may interest him. He then selects some causes among a list of causes provided to him. What may be of additional value is to send out these choices via the portal to all the employees of the company within the network to get a better idea of who is interested in a particular cause. The skill of each employee can be found through. Each survey is in the form of a link so that even people who are not using the platform can have a say in the matter.

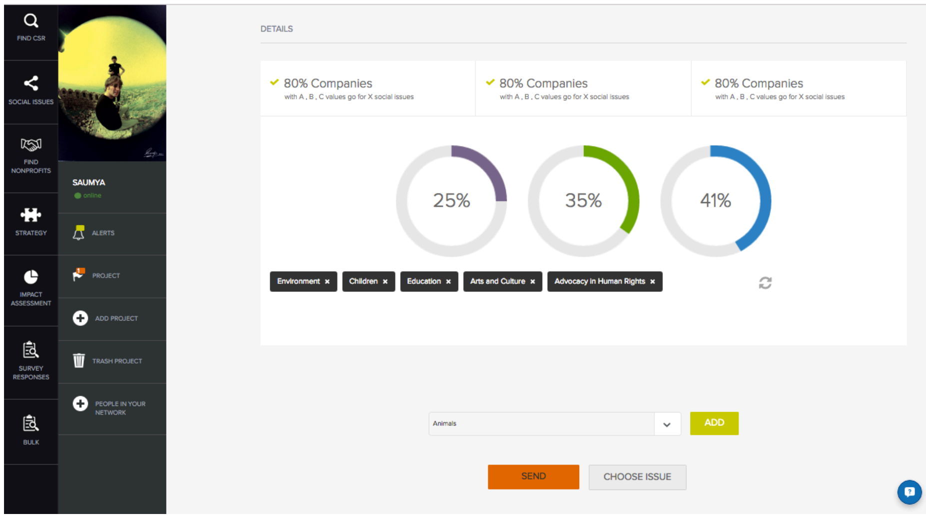

Figure 9: Listing of cause

Figure 10: Survey Link

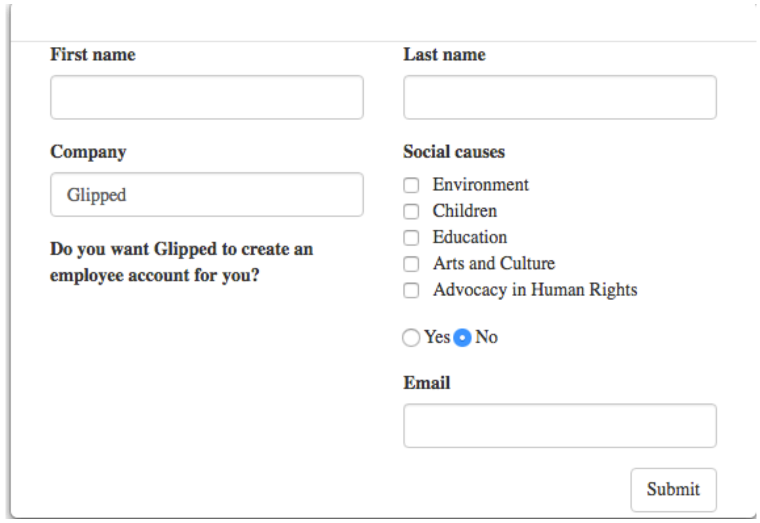

Figure 11: Survey

Each survey link is specific to the project id that is determined while creating the project by the user. The information put in each survey gets populated according to id of the particular project. A function called getExternalSurvey was created which takes the project_id as argument. This function looks up the database to get all the details about the project from the id. It inserts the answers into survey response table, based on project id. It then posts the count of number of people who chose the issue into the survey response. Where the can see the result.

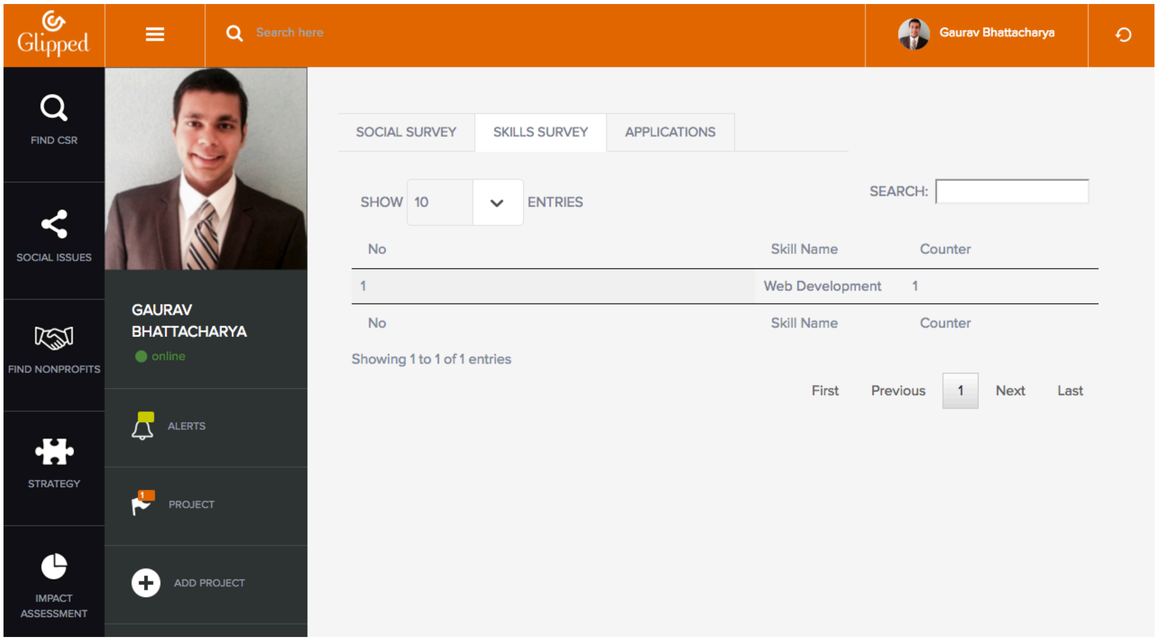

Figure 12: Cause Survey Display

Based on the final causes selected, a list of events which match the cause, match the skill or match both get display. These are shown as below.

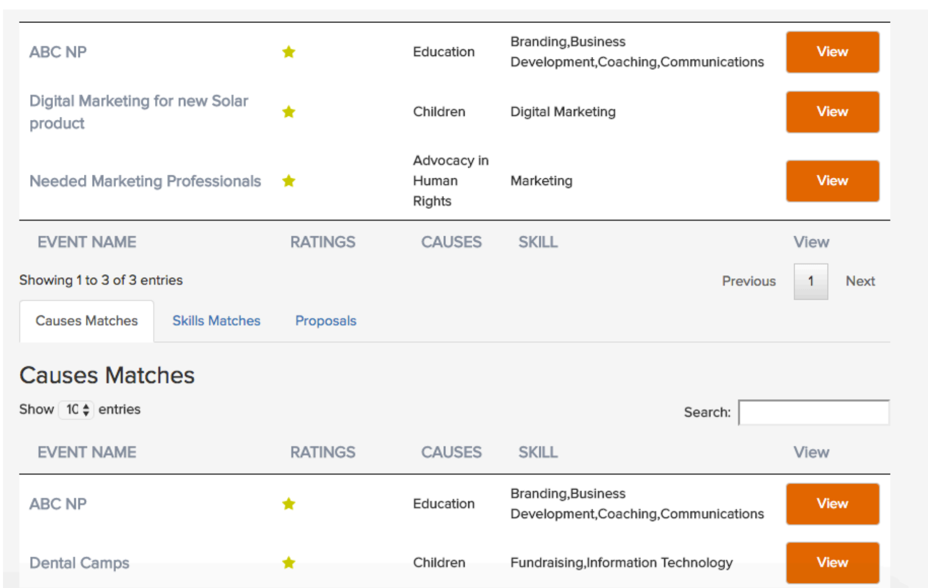

Figure 13: Events matching

For this, two kinds of functions are created; one that selects events with same causes as the ones selected and another, which selects events with the same kind of skill as the employees, selected in their profiles. For events based on cause only, I did a join between the social issue and project issue tables, where the issue id was the same as the issue listed in the project for the survey. A similar concept was used in case of showing skill based only events.

Proposals

Proposals allowed nonprofits to create an application specifically for a company about an event they may want to hold for their employees.

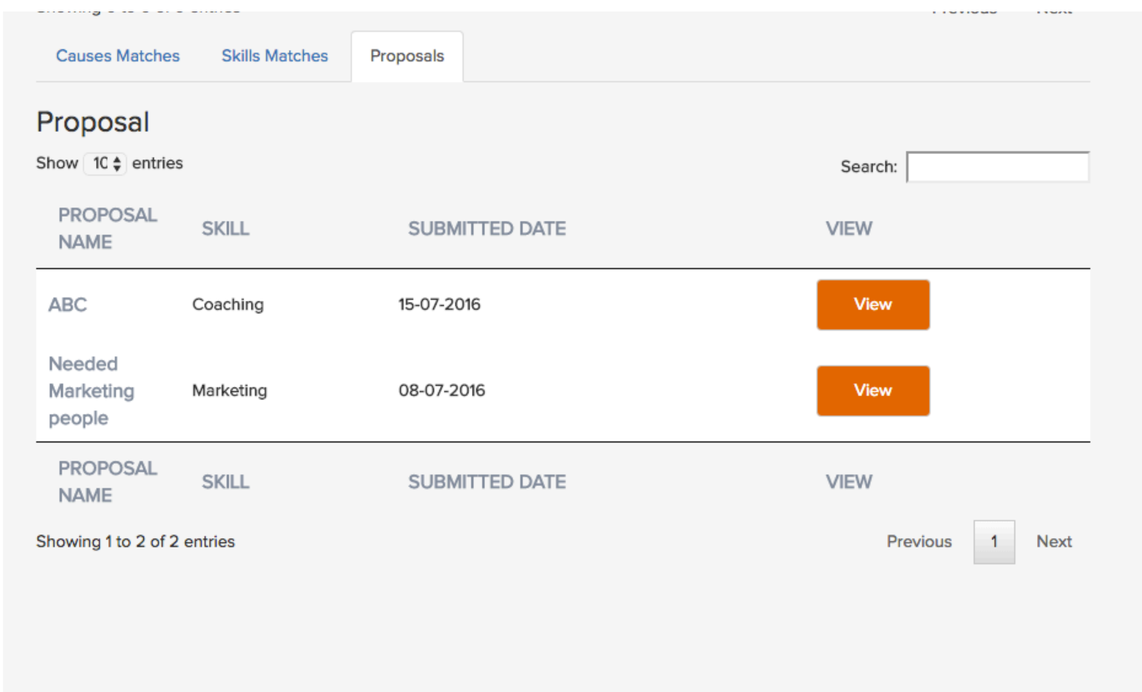

Figure 14: Proposal

Each nonprofit can send a proposal to a company and the company has the right to accept or reject the proposal for each nonprofit. Once the nonprofit fills out a proposal, it gets populated in the proposal table along with the creator's user id and with a unique proposal id. To get the proposal detail, the when the company clicks on the details button, a call is made to the getProposalDetail function which takes the argument of the current user's session id and returns the lookup from the proposal table. The user can choose to share this proposal, and push a notification to the user id he's interested in pushing the notification to. The user can accept or reject the proposal which calls the acceptProposal and rejectProposal functions. The accept proposal, sets the proposal status to 1 and reject sets the proposal status to 2 and sends the nonprofit a notification. Once the proposal is accepted, the nonprofit is prompted to create an event for the company specifically.

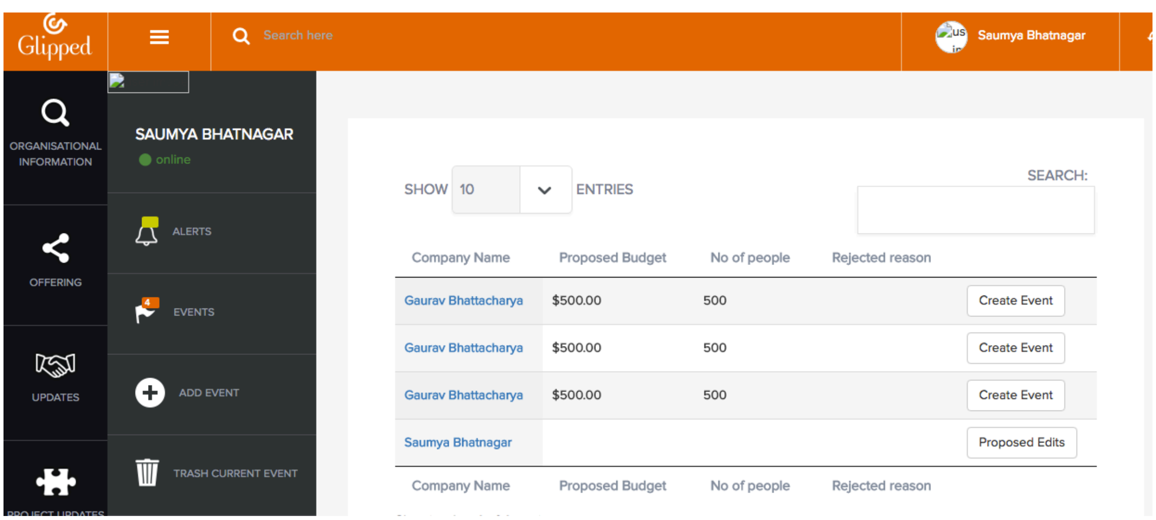

Figure 15: Proposal Updates

CHAPTER IV: RESULTS

A test pilot was run with 50 employees of Company B and 10 employees of Mission Edge with the same functionalities available to the administrator and the employees. The engagement rate increased from 4% (what it was before the introduction of the platform) to 25% in the first day of introduction of platform. There was a steady increase in number of sign ups and activity on the platform and in a week, 50% of the employees began actively using it. The administrator also began actively using the platform to find more events in the area to their liking. Based on the survey sent out, the employees chose ‘Children and Youth’ as the cause as opposed to Food and Hunger, which was the cause they were doing their corporate social responsibility for. Other popular choices were environment, voted by 20% of the employees and 15% voted for community as a cause they are interested in.

When it came to skilled volunteering, 40% employees wanted more outdoor athletic events (like runs for charity), 30% wanted events catered to specifically their expertise and wanted closed events. 80% said virtual events would be something they would be more comfortable with.

More people who were interested in the outdoor and specific skill based events were in the age range of 24 to 35 years or age and had a profession in either sales, marketing or business development. The people more interested in virtual events were either in the age range of 40 and above or had skills which needed less communication skills like the IT department of companies.

People with children or between 35 and 45 years of age were more interested in either kid friendly events or virtual events. This was the demographic that suggested workplace giving instead of mandated outdoor events for charity. Volunteer Time Off however was a good incentive for them to be able to join outdoor events.

The portal sent out emails to people when a new event based on the their skill and causes of their choice was posted. The number of web sessions after each email increased by 5 to 10% when an event that matched the skill of the employee came up as compared to the cause.

While speaking with the test users, the following problems and requirements were also brought up with respect to the platform.

- They wanted to add to their project a mission statement about how they are helping the community and their employees should be able to see it.
- The users also wanted to create a public PR page for the project they are working on for charity
- They wanted a survey of the event that should be hosted by the company
- They wanted to find/create events within 100 km around their office (involving playing with orphan children, buying them clothes, and painting the fence of the orphanage) and wanted to add them to their project, so employees would know this is part of the campaign.
- They want nonprofits to help me organize the 3 events og their choice. They also needed some media coverage if possible.

- They wanted their employees to be informed what they are required to do within the system
- Once their employees accepted an invitation for the event, they saw no easy way to communicate to them about it (apart for sending them emails).

CHAPTER V: CONCLUSION

Based on the results above, which showed the increase in interest and engagement using a web platform for employees for their corporate social responsibility, I can conclude that the scope of this product is not just limited to employee engagement. Gathering the requirements for 5 companies of varying employee sizes gave a clear picture and further cemented the fact that managing corporate social responsibility is indeed hard and using a technology platform greatly increases the employee engagement.

The next steps towards the improvement of the platform are a research and focus on the usability of the product. The next steps after this is introduction of grants management and donations to the employee's favorite charities through the same platform. Research in this field will help to create an end-to-end corporate social responsibility solution.

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