Computer Reach

Executive Summary

Community Partner
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Background

Computer Reach is a Pittsburgh-based organization that focuses on making technology available to underserved communities through providing refurbished equipment as well as computer literacy training and support. They have various programs and projects that distribute refurbished computers and teach digital literacy, and have delivered a total of over 1800 devices each year for the past three years. The organization consists of 14 people, with two directors: Dave Sevick (founder), and Kyle Spangler (program director). Initially, David Mitchell was the technology director but left the organization in early March. Kyle Spangler was our main point of contact within the organization. Additionally, our work directly involved members of the technology team directly handling device refurbishment.

Project Description

Project Opportunity

The opportunity that we identified within Computer Reach's internal process was repetitive manual data entry in the work process and product lifecycle. Whenever a device (usually a laptop or computer) is donated to Computer Reach, the technology team has to audit the device, collect hardware details, and make the respective entries into Salesforce. All data entry was being done manually and posed a significant problem as manual data entries are not only tedious and time-consuming but are also error-prone. These errors lead to further inefficiencies and potential waste of resources down the line. There had been some attempts at automating parts of the system, but the organization lacked sufficient resources to fully address the remaining pain points existing in the different stages of the pipeline.

Project Vision

The overarching goal of both our team and Computer Reach was to make technology more accessible to underserved communities by distributing as many devices to as many people as possible. To achieve this, we aimed to streamline the organization's internal processes, reducing unnecessary workload and ultimately boosting productivity as well as minimizing human errors. This would in turn enable the organization to fulfill more business goals and serve more people in the community in the long run.

Project Outcomes

The team developed a script using Python to automate the device detail collection and respective data entry process into Salesforce. The script can be run on incoming Linux machines to automatically collect device details and upload the respective data into Salesforce. The tech team that deals with incoming donations and device refurbishment can use the script to speed up the audit process while minimizing errors. Additionally, the team also developed technical documentation for the client to maintain the script and potentially build upon its functionality in the future.

Project Deliverables

The project deliverables consisted of a Python script to automatically collect device hardware details and upload them to Salesforce, technical documentation for the script, and a demo video explaining how to use the script.

Recommendations

The team recommends that Computer Reach continue implementing a GUI for the script. A simple GUI was being developed (as a stretch goal) in addition to the existing script but was uncompleted due to time constraints. Moreover, the current script is only able to upload the data of a device that already exists in the Salesforce database. It is recommended that the script be modified to be able to register new devices into Salesforce when starting the device detail collection process.

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Student Consulting Team

Brandan Chen served as the communications manager. He is a third-year majoring in Information Systems with a minor in Game Design. He will be working as a Producer (Team Manager) for Gearbox Software this summer and graduating in December 2023.

Elyse Im served as the project manager. She is a fourth-year student majoring in Information Systems. She will be pursuing a role in Tech Consulting after graduating this Spring.

Joanna Yao served as the lead software developer. She is a fourth-year student with a double major in Information Systems and Computer Science. She will be working at Hudson River Trading full-time after graduating this Spring.