

Computer Reach

Executive Summary

Community Partner

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Background

Computer Reach is a nonprofit organization located in the Wilksburg neighborhood of Pittsburgh. Their mission is to make technology accessible by providing refurbished equipment, computer literacy training, and support services to those who need it most. Computer Reach employs a number of different programs to distribute computers to people including curbside sales, a desktop computer lottery program, and other specialized events with partner organizations in the local community. Computer Reach has continued to grow significantly as of recently, refurbishing over 3,500 computers in just the past year alone.

Project Description

Project Opportunity

As Computer Reach has expanded in operations, the need for more productive data entry processes has grown. Currently, Computer Reach faces many inefficiencies throughout their end-to-end process manually entering data into their Salesforce system. The issues faced are most clearly pronounced with regards to the back-end of Computer Reach's process. Transaction and customer contact information must be entered by hand into Salesforce from the organization's Clover Point of Sale system. The process is time consuming and subject to human error which can be extremely costly to reconcile records in the system.

Project Vision

The disconnect between Computer Reach's POS system and their Salesforce database is the leading cause that requires considerable worker hours to resolve manually inputting data. To reduce the time, our team proposed an automated solution that could work to speed up the manual process, automatically writing data exported from Clover to Salesforce. By automating this manual interaction, Computer Reach experience increased efficiency on the data management end of their process. This time reduction gives Computer Reach more time to focus on what really matters- providing digital literacy for all.

Project Outcomes

The outcomes of this project include workflow documentation, a Python script used to populate Salesforce with transaction data, the documentation associated with the script, and

proposed process documentation for a “scriptless” implementation of our solution. The workflow documentation helped Computer Reach and the team understand the processes of the organization and further define inefficiencies within them. The script was used to parse transaction information from Clover CSV files and send requests to Salesforce which writes contact and transaction information automatically. Documentation was created alongside the solution to outline its use and anticipate issues that may arise in the future. Additional step-by-step documentation was added in case Computer Reach wanted to pursue an enhanced version of the script solution.

Project Deliverables

The primary deliverables for this project include a script processing transaction information and associated documentation of the script. The script contains code to parse CSV files exported from Clover and forms write requests that are passed on to Salesforce. The code also logs CSV files and output for future reference and audit purposes. The documentation of the script outlines the solution in detail, providing high-level and technical information at each step of the solution. It also contains documentation on how to solve problems in the solution if they may arise, as well as considerations for script changes as Computer Reach continues to develop its Salesforce system.

Recommendations

The main recommendation offered to Computer Reach is to pursue a solution that automatically updates Salesforce with contact and transaction information each time a transaction occurs. This would remove the need of the script and would essentially require no time or effort on Computer Reach’s end. The team initially pursued this route but were unable to implement it because it requires one to submit an application to create an app in the Clover App Market. This process can take multiple months and was deemed unfeasible considering the project time frame. Computer Reach would be best suited to contact a third-party developer with Clover experience to help them move forward with this recommendation.

Student Consulting Team

Alec Oshita was the client relationship manager. He is a senior majoring in Information Systems with a minor in Business Administration. He has had past internships in software engineering and will be working full-time at BNY Mellon doing Data Science. His future goals are to work in Venture Capital or a management role at a firm.

Dennis Lo led the team’s technical efforts as quality assurance manager. He is a junior Information Systems major pursuing a double major in Computer Science. He has had past software engineering internships and will be interning as a software engineer again this summer. He is hoping to develop as an engineer in the technology space in the future.

Thomas Yager served as project manager. He is a junior Information Systems major with a minor in Human-Computer Interaction. This summer, he will be interning as a technology consultant and is looking to pursue a future career in this space.