Anamitra Bhattacharyya PREDICT-452 Sect. 55 Individual Assignment 3, Option 3

Robot Process Automation (RPA)

Executive Summary

The aim of this project was to utilize the UiPath Robot Process Automation (RPA) software to download

historical ride share data repositories from the Chicago-based Divvy Bike Share Program website. The

latter data will be used in my subsequent thesis project, to build time series and geospatial models in

order to improve the bike share program. Execution of the UiPath robot successfully downloaded the

data repositories (directories) for rider and bike station usage data files from the Divvy website.

Research design and methods

The strategy used for this exercise was to install the community edition of UiPath robot process

automation (RPA) software and implement an RPA software robot tool to scrape historical ride

sharetextcmd data repositories from the Divvy Bikeshare web site (https://www.divvybikes.com/system-

data) via the Amazon S3 Cloud. Specifically, a robot was created that navigated to the Divvy data web site

using the Google Chrome browser, and sequentially downloaded 9 directories of ridership data from

2013-2017.

Implementation and programming

The UiPath software (Community edition) was installed and used to develop an RPA robot that was

designed to record a web scraping effort directed downloading data repository files from the Divvy

Bikeshare program. The RPA robot was implemented to crawl, using the Google Chrome browser, to just

one website comprising the data repositories.

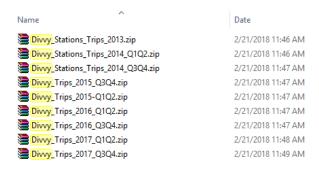
Main program: Resides within the 'BikeshareData' project folder, Main.xaml (main program that calls a

UiPath robot that launches Chrome browser (with Google Chrome extensions enabled), that navigates to

the system data sharing portal for Divvy Bikeshare (https://www.divvybikes.com/system-data) and

proceeds to download data sources comprises rider/station information. The results of the web scraping

resulted in downloading 9 zip archive files containing the ridership data for program from 2013 to 2017, shown in the screenshot below.

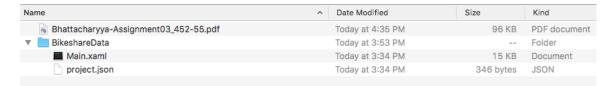


Output folders and files:

BikeshareData/

- Main.xaml: UiPath main program name to crawl Divvy Bike data share site
- project.json

Directory structure of submission



Conclusions

Ride share archive files (zip files) from the Chicago-based Divvy Bike Share Program describing rider and bike station usage data files were successfully downloaded to my PC Desktop, using a UiPath RPA robot designed to navigate using a Chrome browser to the data portal and download data directories.