

Alec Broughal
November 19, 2023

Term Project Progress Update

Progress So Far

(please ignore the file in GitHub called “Main” as I created it when first signing into GitHun and I have not been able to delete it for some reason) As a recap, my final project is focusing on taking a set of user data that includes shopping history for Nike’s website for users who are browsing upper-body clothing. The program that I am writing will then be using that data to make an appropriate assumption for what that user is wanting to purchase, so that it can then recommend advertisements that are more-likely to have the user click on them.

For the data used in my final project, I found a free CSV of sample data for 500 made-up users from this [website](#) and modified it to fit my project. It included some unnecessary data that I removed. The removed data included the following columns; Company Name, Address, County, ZIP, Phone 1, Phone 2, & Web. I then added the following columns; Quarterly, Size, Item 1, Item 2, Item 3, Item 4, Item 5, Item 6, Item 7, & Item 8, which is the user’s data that we will be taking a look at in the newly created program. For this project, I am only focusing on upper-body-wear, meaning anything you’d wear on your torso and not your legs. The items that are being looked at are; SS(Short Sleeve) Shirt, LS(Long Sleeve) Shirt, Polo Shirt, Button Down Shirt, Zip up Jacket, Crewneck Sweater, & Hoodie.

Challenges

Manually adding the 11(1 for size and 10 for browsed clothing items) data columns was time consuming, but not necessarily a challenge. I sorted each column a different way when manually adding the item data, so that when I finally sorted it by ascending alphabetical order by first name, they were in a “randomized order” of the data that was added per user, to try and give as much real-life variation as possible to the clothing items they browsed. There were also certain users where I purposefully added numerous of the same browsed item, to replicate a real-life user who is specifically searching for an item within that category, as opposed to a user who is just mindlessly browsing the website without much intent on purchasing anything/isn’t looking at specific categories.

The main challenge will be writing the functioning code that executes this advertisement-deciding program. I have not coded a full project in Python before, there have always been outlines or functions provided and then I build up on top of them, so it is definitely a challenge learning the coding language and then creating the program to do what I am asking it to do. It has taken me countless hours just to get to the point at which I’m currently at, and I am still only at the beginning of the entire coding. But I know that once I get these first few functions coded, I shouldn’t have an issue getting to the rest of them.

Working alone is making it more difficult as well, since 100% of the workload falls on me, but I also enjoy the challenge of working solo on this project and think that it will be more beneficial than having just done a small percentage of the work.

Collaboration

This is not applicable as I am working on this project alone.

Next Steps

The next steps are to continue writing the code for the program so that it can input a CSV and then read it and determine which advertisement would be best. The first image below is my original outline for the code, which I am still sticking to until running into something in the coding that requires a change. But I believe to have thought it out thoroughly enough to not need to deviate too much from that plan. The second image below is an example of the user data with all the columns included. The item columns are listed in the order in which the user viewed the item on Nike's website, meaning that the first item they viewed was Item 1 and the last item they viewed was Item 10. The program will use that order under certain circumstances to help determine the correct advertisement to display.

Program Outline

Alec
Broughal

CIS 635

Nike User Data Used For Advertisement Selection

- take CSV & separate ~~row~~ row by row to execute code.
- Code reads the column "Year Quarter" to determine the current time of year.
- Code determines within the program that this is the coldest quarter of the year, to make determinations later on.
- Code reads the CSV row by row, creating categories of each new item in rows "Item 1 - Item 10"
- On a per user basis, the code adds a tally of the total amount in each category to determine the appropriate advertisement.
- The program already has a pre-written ranking of the possible categories in a "warm-cold" scale, meaning which categories are better for warmer weather & which are more suited for cold weather.
- If there's a 2-way tie between categories, the code will look at the state the user is from & check the ranking for that year quarter to help determine decision.
- If there's a 3-way tie, program looks at if any 3 are consecutive. If not, it looks at Year Quarter & Weather-based, otherwise if two or all three categories are consecutive, it chooses the one in Item 10, & if none, then Item 9 for most recent look.
- If 4-way tie, it checks if any are consecutive. If two or more categories are consecutive, it checks which is ~~more~~ closer to Item 10.
- If 5-way tie, ~~it selects the~~ if a category is both Item 1 & Item 10, Code chooses that one, otherwise closest consecutive to Item 10

nike_user_data

First Name	Last Name	City	State	Account Email	Quarterly	Size	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7	Item 8	Item 9	Item 10	
Abel	Maclead	Middle Island	NY	amaclead@gmail.com	Q1	S	Hoodie	Zip up Jacket	Hoodie	LS Shirt	Crewneck Sweater	SS Shirt	Crewneck Sweater	LS Shirt	LS Shirt	Button Down Shirt	
Adeline	Nabours	Cleveland	OH	adeline_nabours@gmail.com	Q1	S	LS Shirt	Crewneck Sweater	LS Shirt	Hoodie	Button Down Shirt	LS Shirt	Crewneck Sweater	Hoodie	LS Shirt		
Adell	Lipkin	Whippany	NJ	adell.lipkin@pinkn.com	Q1	L	LS Shirt	LS Shirt	SS Shirt	SS Shirt	SS Shirt	SS Shirt	LS Shirt	Hoodie	SS Shirt		
Ahmed	Angalich	Hamburg	PA	ahmed.angalich@gmail.com	Q1	M	LS Shirt	Crewneck Sweater	Hoodie	LS Shirt	Button Down Shirt	LS Shirt	LS Shirt	Hoodie	LS Shirt		
Aja	Gehrrett	Nutley	NJ	aja_gehrnett@hotmail.com	Q1	XL	SS Shirt	Zip up Jacket	LS Shirt	Hoodie	SS Shirt	LS Shirt	Polo Shirt	Crewneck Sweater	SS Shirt	Button Down Shirt	
Ajaine	Bergesen	Yonkers	NY	ajaine_bergesen@cox.net	Q1	XL	SS Shirt	Crewneck Sweater	LS Shirt	LS Shirt	Zip up Jacket	LS Shirt	Crewneck Sweater	SS Shirt	LS Shirt		
Albina	Glick	Dunellen	NJ	albina@glick.com	Q1	M	Hoodie	LS Shirt	Button Down Shirt	Hoodie	LS Shirt	Zip up Jacket	Hoodie	LS Shirt	Zip up Jacket	SS Shirt	
Aliese	Buemi	Boulder	CO	aliese@buemi.com	Q1	XS	SS Shirt	Crewneck Sweater	Hoodie	SS Shirt	LS Shirt	LS Shirt	Hoodie	LS Shirt	LS Shirt	LS Shirt	
Alicia	Bubash	Wichita Falls	TX	alicia@bubash.com	Q1	S	Polo Shirt	Zip up Jacket	LS Shirt	LS Shirt	Button Down Shirt	LS Shirt	Hoodie	Button Down Shirt	Button Down Shirt		
Alesia	Hixenbaugh	Washington	DC	alesia_hixenbaugh@hixenbaugh.org	Q1	S	Hoodie	Crewneck Sweater	LS Shirt	SS Shirt	Button Down Shirt	SS Shirt	SS Shirt	Crewneck Sweater	SS Shirt	Zip up Jacket	
Alex	Loader	Tacoma	WA	alex@loader.com	Q1	L	SS Shirt	LS Shirt	LS Shirt	Hoodie	SS Shirt	LS Shirt	Button Down Shirt	Hoodie	LS Shirt	Polo Shirt	
Aliatu	Susarski	Middlesex	NJ	aliatu@susarski.com	Q1	S	Polo Shirt	LS Shirt	Zip up Jacket	Hoodie	LS Shirt	Zip up Jacket	Crewneck Sweater	Zip up Jacket	Polo Shirt	LS Shirt	
Aliyah	Sergi	New York	NY	aysergi@gmail.com	Q1	S	SS Shirt	LS Shirt	Crewneck Sweater	Hoodie	LS Shirt	LS Shirt	Butter Down Shirt	Button Down Shirt	Hoodie		
Aliza	Baltimore	San Jose	CA	alizaf@cox.com	Q1	S	Hoodie	Crewneck Sweater	LS Shirt	LS Shirt	Crewneck Sweater	Zip up Jacket	Zip up Jacket	Zip up Jacket	SS Shirt		
Allene	Jurbidge	Stevens Point	WI	allene_jurbidge@cox.net	Q1	M	Button Down Shirt	LS Shirt	Zip up Jacket	LS Shirt	Zip up Jacket	Hoodie	LS Shirt	Crewneck Sweater	SS Shirt	Crewneck Sweater	
Alline	Jeanty	South Bend	IN	ajeanty@gmail.com	Q1	L	Button Down Shirt	LS Shirt	Crewneck Sweater	LS Shirt	Crewneck Sweater	Zip up Jacket	SS Shirt	Hoodie	LS Shirt		
Alpha	Palais	Cherry Hill	NJ	alpha@palais.org	Q1	XL	LS Shirt	Hoodie	LS Shirt	SS Shirt	SS Shirt	Crewneck Sweater	LS Shirt	LS Shirt	Hoodie	SS Shirt	
Alyce	Arias	Stockton	CA	alyce@aries.org	Q1	L	SS Shirt	Crewneck Sweater	LS Shirt	SS Shirt	LS Shirt	LS Shirt	Hoodie	Hoodie	Hoodie	SS Shirt	
Amber	Monarez	Jenkintown	PA	amber_monarez@moneysense.org	Q1	S	Hoodie	Hoodie	SS Shirt	SS Shirt	SS Shirt	Zip up Jacket	LS Shirt	Hoodie	LS Shirt	Hoodie	
Annie	Perigo	Mesquite	TX	annie.perigo@yahoo.com	Q1	L	SS Shirt	Zip up Jacket	SS Shirt	Hoodie	LS Shirt	LS Shirt	LS Shirt	Crewneck Sweater	SS Shirt	Button Down Shirt	
Annie	Corino	Columbus	OH	annie@corino.com	Q1	S	LS Shirt	SS Shirt	LS Shirt	SS Shirt	SS Shirt	SS Shirt	Crewneck Sweater	SS Shirt	Hoodie	LS Shirt	
An	Fritz	Atlantic City	NJ	an_fritz@hotmail.com	Q1	L	Button Down Shirt	LS Shirt	LS Shirt	SS Shirt	SS Shirt	SS Shirt	Zip up Jacket	LS Shirt	Hoodie		
Andra	Scheyir	Salem	OR	andra@raffmail.com	Q1	S	SS Shirt	Crewneck Sweater	SS Shirt	Hoodie	Crewneck Sweater	Zip up Jacket	SS Shirt	Crewneck Sweater	LS Shirt	Zip up Jacket	
Angelina	Cetta	Honolulu	HI	angelina.cetta@hotmail.com	Q1	M	Hoodie	LS Shirt	Hoodie	LS Shirt	LS Shirt	Hoodie	LS Shirt	Zip up Jacket	Hoodie		
Amabelle	Board	Concord	MA	amabelle.board@cox.net	Q1	L	Crewneck Sweater	Crewneck Sweater	Button Down Shirt	LS Shirt	Zip up Jacket	LS Shirt	SS Shirt	SS Shirt	Button Down Shirt	SS Shirt	
Annelle	Tagala	Panhandle	MD	annelle@yahoo.com	Q1	S	LS Shirt	SS Shirt	Hoodie	Crewneck Sweater	Hoodie	LS Shirt	SS Shirt	LS Shirt	LS Shirt	LS Shirt	
Annmarie	Castros	Conroe	TX	annmarie_castros@gmail.com	Q1	L	SS Shirt	Hoodie	LS Shirt	Zip up Jacket	LS Shirt	Button Down Shirt	LS Shirt	Hoodie	Polo Shirt		
Antonia	Onefrio	San Bernardino	CA	antoniofrio@onefrio.com	Q1	L	Polo Shirt	Hoodie	Zip up Jacket	Hoodie	SS Shirt	SS Shirt	LS Shirt	Crewneck Sweater	Hoodie	SS Shirt	
Arlene	Kuanman	New Orleans	LA	arlene_kuanman@gmail.com	Q1	XL	Crewneck Sweater	SS Shirt	LS Shirt	Zip up Jacket	LS Shirt	Button Down Shirt	LS Shirt	SS Shirt	SS Shirt		
Arlette	Honeywell	Jacksonville	FL	ahoneywell@honeywell.com	Q1	S	Zip up Jacket	Zip up Jacket	Crewneck Sweater	Zip up Jacket	Hoodie	Hoodie	Polo Shirt	Hoodie	SS Shirt	Polo Shirt	
Arminda	Parvis	Phoenix	AZ	armindal@parvis.com	Q1	XS	Button Down Shirt	LS Shirt	LS Shirt	SS Shirt	SS Shirt	SS Shirt	Hoodie	Hoodie	Zip up Jacket	LS Shirt	
Art	Veneri	Bridgeport	NJ	art@veneri.org	Q1	L	LS Shirt	Crewneck Sweater	Hoodie	SS Shirt	SS Shirt	Hoodie	LS Shirt	SS Shirt	SS Shirt	SS Shirt	
Arthur	Farrow	Englewood	NJ	arthur.farrow@yahoo.com	Q1	M	Hoodie	SS Shirt	SS Shirt	LS Shirt	Zip up Jacket	LS Shirt	Zip up Jacket	SS Shirt	SS Shirt	Button Down Shirt	
Ashley	Pinilla	Ojai	CA	ashley.pinilla@cox.net	Q1	S	LS Shirt	Zip up Jacket	Crewneck Sweater	Polo Shirt	Zip up Jacket	Hoodie	Zip up Jacket	SS Shirt	Hoodie	Hoodie	
Audra	Kohner	Nashville	TN	audra@kohner.com	Q1	XS	Zip up Jacket	Hoodie	SS Shirt	SS Shirt	SS Shirt	Crewneck Sweater	LS Shirt	LS Shirt	LS Shirt		
Audry	Yao	Brandon	FL	audry.yao@yahoo.org	Q1	XL	LS Shirt	Crewneck Sweater	Hoodie	LS Shirt	LS Shirt	SS Shirt	SS Shirt	SS Shirt	SS Shirt		
Avery	Stair	Orlando	FL	avery@cox.net	Q1	S	LS Shirt	SS Shirt	SS Shirt	LS Shirt	Crewneck Sweater	Polo Shirt	LS Shirt	Crewneck Sweater	SS Shirt	SS Shirt	
Barbara	Adkin	Brooklyn	NY	badkin@hotmail.com	Q1	L	LS Shirt	Hoodie	Zip up Jacket	Hoodie	Zip up Jacket	SS Shirt	Crewneck Sweater	SS Shirt	Zip up Jacket	Hoodie	
Barrett	Toyama	Kennesaw	TX	barrett.toyama@hotmail.com	Q1	S	Button Down Shirt	SS Shirt	Polo Shirt	LS Shirt	Hoodie	Button Down Shirt	LS Shirt	LS Shirt	LS Shirt		
Batriz	Corrington	Middleboro	MA	batriz@yahoo.com	Q1	L	Button Down Shirt	Hoodie	LS Shirt	Hoodie	LS Shirt	SS Shirt	Hoodie	Hoodie	Zip up Jacket		
Beckie	Silvestri	Dearborn	MI	beckie.silvestri@silvestri.com	Q1	XS	Hoodie	Crewneck Sweater	SS Shirt	SS Shirt	Zip up Jacket	Button Down Shirt	Hoodie	LS Shirt	Zip up Jacket	Hoodie	