Product Owner

Monday, November 13, 2023 6:35 PM

Road blocks:

Adjusting to role changes

Finding and scaping public data for specific subjects

What we are working on:

Figuring out creating child issues for the upcoming weeks

Discussed that whatever we don't finish in class for week 8 and 9, we will be moving that over to homework as catch up

Capstone Status:

Topic changes again to find available data

Working on importing data into python as a csv or xlsx

Will be learning APIs in about 2 weeks to assist in getting additional data sources

Career:

Some of us is still working on resume Laura and LinkedIn.

Setting up meetings with David Roberts.

Road blocks:

Have issues but it's being addressed on Jira ticket

Capstone Status:

Switched capstone that feels more comfortable with and has a vast amount of data they could actually find

Asking subset questions are actually helping out

Everyone is comfortable where they are at now

Career: Laurie , Barbe, David

Met with Laurie earlier to get resume clear and cut
Need to contact with Laurie to tailor resume to our job listings

Got reviews with David and learning our issues, happy that he's a perfectionist for all the savvycoders

Need to schedule appointments with barbe so we can get out capstone intros for our videos since some of us are fully adjusted to where we are at on our capstone

Road blocks:

-as of right now, there are no road blocks and completed the week 7 sprint

Road blocks:

Long times for Jira tickets to get answered
Capstone

What we are working on:

Capstone Status:

Add in a subset questions

Career:

Setting up meetings with Jonathan for capstone data that's out there before or after class

Trying to find data itself like data.gov

Updates:

Wishing we started with SQL and APIs to figure out how to data clean and wrangle

Capstone Status:

-watched a couple videos of other students capstone videos to give us a better example of how we should present their capstone
-understanding how to clean up our data and creating charts
-removing $ signs and making our data into integers
-wondering if we're doing things in python or sql to clean up our data

Career: Laurie , Barbe, David

-some of us am doing my elevator speech on Monday
-contacted steph to help find careers that we would be interested in
-trying to figure out how the job market is and feel like how the process will be if most of us in savvy coders know like 40% of the information was retained throughout this course? Assuming we be looking for Entry level positions to understand the industry/company we are working for

Road blocks:

-Just following APIs from yesterday
-Had complications on following the last 30 mins of class yesterday for URLs on Insomnia

Capstone Status:

-getting scheduled for capstone intros to be completed in Decemeber

Career: Laurie , Barbe, David

-some met with barbe yesterday to finish up elevator speech
-waiting for david to send video review for their LinkedIn
-Looking over each other's LinkedIn to give our own critques we received from David and try to apply it to ourselves

Road blocks:

-

Capstone Status:

-scheduled mettings with one of the TA's to just to make sure everything looks good for Capstone

Career: Laurie , Barbe, David

-Scheduled appointments with Laurie over this week to see what we were interested in
-Talked about our resumes all together

-talked about where we should be applying for local areas
-wondering if we should be applying for big named companies or just strictly within our area as entry level
-noticed that there were a lot of lay offs or switching to hybrid work environments in the financial realm like banks
-are companies stopping the WFH movement for tech which was mainly the appeal
-wondering how difficult it is to find a job from now and after this program
-are best times to apply around April/May

Mid-end Jan is best

Get connected with Steph to try to connect with people on LinkedIn for interested

Road blocks:

-

Capstone Status:

-working with Tableau to make some updates,
-creating a bigger portfolio through github with our cleaning and separate repos
-possibly adding in more data from our data set to better present that bigger picture to our question
-talked about what we used for our capstones like importing multiple excel files to input into SQL to start cleaning

Career: Laurie , Barbe, David

-Actively applying,
-interviews are in place,
-contacting laurie or barbe for interview preps,
-some have still updates for David Roberts on LinkedIns,
-verifying attendance for military personals

Road blocks:

- One of us is trying to import csv files to tableau but figured we just have to create an excel spreadsheet then import it in

Capstone Status:

- Finding formulas to splice all the unnecessary characters using Excel

Career: Laurie , Barbe, David

- Interviews practiced with Laurie
- some have upcoming interviews
- Talked about ways to talk about past experience and ending the conversation on a good note with a positive attitude
- Make sure to be prepared to ask questions at the end
- Some were told that wherever worked in a specific organization and then worked next in the civilian sector assisted in progressing their military retirement of 20 years

Shortcuts

Thursday, October 19, 2023 8:44 PM

https://code.visualstudio.com/shortcuts/keyboard-shortcuts-windows.pdf

https://chrome.google.com/webstore/detail/instant-data-scraper/ofaokhiedipichpaobibbnahnkdoiiah?utm_source=ext_app_menu

Freddie's Capstone

Thursday, October 12, 2023 6:13 PM

SELECT FROM HAR MLS HOUSEING TYPE = RESIDENTIAL

Narrative: Best homes for first time home buyers inside the Houston city limit. (300k-500k home prices)

1. Create a database from any source you want (MLS, USE SYSTEM default to export)
   a. Areas
   b. Bed/bath
   c. Yard
   d. School zone
   e. ~~Interest Rate (credit score, loan amount, income)?~~
2. Prep your dataset
   a. MLS listing
      i. Group by zip codes
      ii. Har.com
   b. Crime Area
      i. Group by zip codes
      ii. https://www.houstontx.gov/police/cs/Monthly_Crime_Data_by_Street_and_Police_Beat.htm
   c. School Areas
      i. Group zip codes by school area
      ii. https://tea.texas.gov/texas-schools/accountability/academic-accountability/performance-reporting/2022-accountability-rating-system
      iii. https://schoolsdata2-tea-texas.opendata.arcgis.com/datasets/675cd244e150480ea725747ceb4579dc/explore
3. Visualize
   a. Crime by zip code
   b. Homes list by school district
   c. Home Prices overall.
4. Enriching
   a. Combined the datasets of crime rates and the har datasets

Once you are done with the excel MLS list, send it to sheilavnguyen@outlook.com to get the school district column append to it.

From <https://mail.google.com/mail/u/0/#inbox/FMfcgzGtxdWxtjDMwjbzQrgTbkSMdHxL>

PART 1:
Create Introduction for my Capstone

Tell my story: Lots of data from both industries

Tell them why this is a good research project for myself: finding out trends and why im interested in the topic

Questions I'm trying to answer: affordability, safety, school zones

-Send by NOV 9

PART 2:
How I cleaned my data

How I came up with my Python code

Show the analysis and talk about the data

Give conclusion

Tell my story:
Hi everyone, my name is Freddie! I was a mechanic for the US Army and finished my bachelors in marketing shortly after. After fully transitioning into the civilian sector, I became a realtor and an insurance agent for the state of TX. My capstone presentation is centered around the Houston real estate market and answering questions for first time home buyers.

Why this is a good research project for myself:
What made me want to base my project on real estate is because I have insider knowledge of the market values for homes in my area with an added bonus of the ability to look at a wide range of datasets from both industries.

Questions I'm trying to answer:
The questions I'm going to be covering will be "What's the market value of homes? How are the schools for my children? What is the crime rate in my area?".
The initial question that covers all the one's I listed above will be "What is the best home for first time home buyers in the Houston Area city limits?". This is a broad question which will cover affordability, safety and school zones within 2020-2023

EDIT:

I think when you are talking about the questions you are trying to answer it is better to start with your general question and go into you deep dive questions vs. starting with the specific questions and leading into the general question.

For instance, you could say:

The initial question I wanted to answer is... What is the best home for first time home buyers in the Houston area? There are several factors that one must consider when looking for the "best" home, such as crime rate, school rankings, and market rate (add whatever other metrics you are analyzing here) so will answer these additional questions: "What's the market value of homes? How are the schools for my children? What is the crime rate in my area?".

From <https://app.slack.com/client/T09CULVUZ/D05TS9T1RPC>

Tell my story:
Hi everyone, my name is Freddie! I was a mechanic for the US Army and finished my bachelors in

marketing shortly after. After fully transitioning into the civilian sector, I became a realtor and an insurance agent for the state of TX. My capstone presentation is centered around the Houston real estate market and answering questions for first time home buyers.

Why this is a good research project for myself:
What made me want to base my project on real estate is because I have insider knowledge of the market values for homes in my area with an added bonus of the ability to look at a wide range of datasets from both industries.

Questions I'm trying to answer:
The initial question I wanted to answer is... What is the best home for first time home buyers in the Houston area? This is a broad question would cover affordability, safety and school zones within 2020-2023.

There are several factors that one must consider when looking for the "best" home, such as crime rate, school rankings, and market rate will be answering these additional questions. : "What's the market value of homes? How are the schools for my children? What is the crime rate in my area?".

GitHub Homework

Thursday, October 12, 2023 9:38 PM

Git add .
Git commit -m "whatever I did"
git push
Git status

(git --rebate or --rebase) if there's an error

Week 1
- -Mark down file - git/github section
- -Capstone - git/github section

Week 2
- -Excel

https://app.mural.co/t/savvycoders1999/m/savvycoders1999/1696989935822/c94dea41e1651b1c9a48692df5a4ceca5b3354f8?sender=u1a96c172f21b7a43ed281175

Capstone Issues

Tuesday, November 14, 2023 12:48 AM

1. Figuring out how to clean, sort, and wrangle data using python with 3 different data sets using Basic EDA
2. How to take zip codes from one data set and compile it onto the data set with the school grade ratings

Key Topics:

Wednesday, November 1, 2023 7:16 PM

- Basic python programming
- Data Analysis w/ Python libraries
- Data cleaning
- SQL Joins and querying
- Visualization using tableau
- Business intelligence solutions
- Agile methodologies
- Case studies with a presentation of results as a capstone project

Know what I'm suppose to do as a capstone project before beginning of class in October

<u>This class will provide LinkedIn skills, mock interview skills, resume skills, and networking skills</u>

Compiler: takes code to convert it to machine language, Intrepreter language

Shell: command line (windows command prompt), a user interface like gitbash to execute python trials

Function – print

Parameters- anything inside the parenthesis ()

Jupiter is a tool that we use with an IDE, not used for debugging

Python, HTML, CSS is a programming language

Module is a collection of pre-created functions to be used on python (library)

SQL: whole bunch of data for statistics (bunch of numbers)

Software is DB browser

Tableau is a visualization software to give interactivity to graphs (this might be what I like to do)

Capstone project: I will seek out existing databases to clean/wrangle, evaluate and analyze with Python/SQL, and present using Tableau (topic of my choice)

How many hours per week to take the class: 10-15 hours to do homework and capstone (first couple weeks will be 10hrs then it'll be a heavier load for the rest of the class) 3 hours of class mon-thur and then 3+ hours afterwards

Data Analyst

Monday, October 16, 2023 7:17 PM

Agile Mindset
1.
2.
3.
4.

Scrum Master - assists and takes notes for the PM
Project Manager - the person who helps and organize the team

DA and Python is hot right now
-DA : extract and catalogue data

4 main categories of DA:
1. Descriptive Analysis - identify trends and relationships
2. Diagnostic Analysis - determine why something happens
3. Predictive Analysis - make predictions about future outcomes
4. Prescriptive Analysis - determine an optimal course of action

Coders block : getting comfortable in getting into more problems and solving the puzzles

1. figure it out yourself for 20-1hr
2. ask teammates
3. ask supervisor (try to avoid asking for help from these)

Data analyst - looks at historical data (excel, tableau, SQL)
Data engineer - builds data sets / databases (hadoop, NoSQL, Python)
Data Scientists - uses historical data to build predictive models that are going to predict the future (building AIs) (SQL, Python, R)

NoSQL - database language that does not rely only on SQL

DA Skillsets
-Programming: Python
-Data Wrangling: Excel, API (Joining data sets, finding gaps, cleaning data, identifying outliers)
-Database Management: SQL
-Data Visualization: Tableau
-Version control (GIT)
-Different database tech
-Statistical processes
-Basic understanding of front-end tech
-Project Management - Agile

CAPSTONE PROJECT - have to use:
1. Python
2. Excel or SQL
3. Tableau

Python 3 & Jupyter Notebook

Monday, October 16, 2023 7:13 PM

Algorithms: series of steps to solve a problem
Program: series of instructions telling a computer how to solve a problem

Coding Languages - Interpret and Compiled languages

Interpreted- processes programs a little bit at a time, reading lines and performing computations
Compiled - reads whole program at once and then translate it completely into a machine code before starting to run the program

Types of languages- natural and formal

Natural - mostly spoken that form on their own
Formal - designed by people

Common Programming Vocab

Value - numbers
Variable - a name that refers to value like x or y
Variable name
Str - a python data type that holds string of characters
Operators - special symbols that represents a simple computation
Data type - set of values
Comment
Input
Output

PY4E - https://www.py4e.com/

Different ways to code Python

- Integrated development environment (IDE)
- Command-line interpreter

REPL

Reads the command to you
Evaluates and executes the command
Prints the output to console
Loops back and repeat the process

Debugging is a VERY useful tool

- Regularly test andd review code as im writing it
- Chunk code into smaller sections
- Explain code out as a 5 year old
- Work backwards to finding issue
- Take a break and come back
- Ask someone to look at the code

https://rubberduckdebugging.com/

Shortcuts in Jupyter Notebook

Monday, October 16, 2023 9:26 PM

Redo	Ctrl + Shift + Z
Undo	Ctrl + Z
Interrupt Kernel	I + I
Restart Kernel…	0 + 0
Change to Code Cell Type	Y
Change to Heading 1	1
Change to Heading 2	2
Change to Heading 3	3
Change to Heading 4	4
Change to Heading 5	5
Change to Heading 6	6
Change to Markdown Cell Type	M
Change to Raw Cell Type	R
Collapse All Headings	Ctrl + Shift + Arrow Left
Copy Cell	C
Cut Cell	X
Delete Cell	D + D
Enter Edit Mode	Enter
Expand All Headings	Ctrl + Shift + Arrow Right
Extend Selection Above	Shift + Arrow Up
Extend Selection Above	Shift + K
Extend Selection Below	Shift + Arrow Down
Extend Selection Below	Shift + J
Extend Selection to Bottom	Shift + End
Extend Selection to Top	Shift + Home
Insert Cell Above	A
Insert Cell Below	B
Insert Heading Above Current Heading	Shift + A
Insert Heading Below Current Heading	Shift + B
Merge Cell Above	Ctrl + Backspace

Merge Cell Below	Ctrl + Shift + M
Merge Selected Cells	Shift + M
Move Cell Down	Ctrl + Shift + Arrow Down
Move Cell Up	Ctrl + Shift + Arrow Up
Select Cell Below	Arrow Down
Select Cell Below	J
Select Heading Above or Collapse Heading	Arrow Left
Select Heading Below or Expand Heading	Arrow Right
Select Cell Above	Arrow Up
Select Cell Above	K
Paste Cell Below	V
Redo Cell Operation	Shift + Z
Run Selected Cell and Do not Advance	Ctrl + Enter
Run Selected Cell and Insert Below	Alt + Enter
Select All Cells	Ctrl + A
Show Line Numbers	Shift + L
Render Side-by-Side	Shift + R
Undo Cell Operation	Z
Run Selected Cell	Shift + Enter
End Search	Escape
Find Next	Ctrl + G
Find Previous	Ctrl + Shift + G
Find…	Ctrl + F
Activate Next Tab	Ctrl + Shift +]
Activate Next Tab Bar	Ctrl + Shift + .
Activate Previous Tab	Ctrl + Shift + [
Activate Previous Tab Bar	Ctrl + Shift + ,
Toggle Left Area	Ctrl + B
Toggle Mode	Ctrl + Shift + D
Activate Command Palette	Ctrl + Shift + C
Show Keyboard Shortcuts	Ctrl + Shift + H
Pause	F9
Next	F10
Debugger Panel	Ctrl + Shift + E
Step In	F11

Step Out	Shift + F11
Terminate	Shift + F9
Save Notebook	Ctrl + S
Save Notebook As…	Ctrl + Shift + S
Activate Previously Used Tab	Ctrl + Shift + '
Table of Contents	Ctrl + Shift + K

From <http://localhost:8888/notebooks/dap-curriculum/Section03/3.1-JupyterNotebooks_PythonIntro.ipynb>

Variables and Functions - David Mangano

Tuesday, October 17, 2023 7:46 PM

String is within the parentheses which is the parameter
() = parameter
"" = string
Variable is beginning of everything > Variable = 50

Print(variable)
This will print the text
Ex. Variable = 11 > print(variable)
Variable = 50 > print(variable)
11
50

Examples:

```
print("Hello, World")
title = 'Hi.'
title_ending = ' Thank you for playing'
print(title + title_ending)

# variables
persons_name = input('Please write your first name: ')
animal_name = input('Please write your favorite animal: ')
profession = input('Please write your profession: ')
print(persons_name)

#paragraphs
print('My name is ' + persons_name)
print ('My favorite animal is ' + animal_name)
print('My profession is ' + profession)


#paragraph 2
print(f'My name is {persons_name}')
print(f'My favorite animal is {animal_name}')
print(f'My profession is {profession}')
print(f'My profession is {profession} {animal_name}')


#paragraph 3
string = f"""
        My name is {"persons_name"}.
        My favorite animal is {animal_name}'
        My profession is {profession}.
        """
string2 = f"""
My name is {persons_name}. My favorite animal is {animal_name}. My profession is
{profession}.
        """
print('multi line: ')
print(string)
print('one line: ')
```

```
print(string2)


#ending
print('Game Over')
```

```
Hello, World
Hi. Thank you for playing
Fred
My name is Fred
My favorite animal is Dog
My profession is Data
My name is Fred
My favorite animal is Dog
My profession is Data
My profession is Data Dog
multi line:
"
        My name is persons_name.
        My favorite animal is Dog'
        My profession is Data.

one line:

My name is Fred. My favorite animal is Dog. My profession is Data.

Game Over
```

Data Types

Category	Data Type	Examples
Sequence	string (str)	`x = “Hello World”`
Numeric	integer (int)	`x = 20`
Numeric	Floating-Point Numbers (float)	`x = 20.5` (numbers with a decimal point)
Sequence	list	`x = [“apple”, “banana”, “cherry”]`
Sequence	tuple	`x = (“apple”, “banana”, “cherry”)`
Sequence	range	`x = range(5)`
Mapping	dictionary (dict)	`x = {“name” : “John”, “age” : 36}`
Boolean	boolean	`x = True`

String Splicing

Tuesday, October 17, 2023 9:12 PM

```
# class example here
# [start:end:step(optional)]
# starts at beginning: up to BUT NOT INCLUDING that inddex
example_string = 'lemonade'
print(example_string[0:5])
print(example_string[:5])
print(example_string[4:])
print(example_string[-8:])
print(example_string[:8])
```

```
lemon
lemon
nade
lemonade
lemonade
```

Complex Data Types

Wednesday, October 18, 2023 7:56 PM

Checking length of list

```
# input list
lst = ["Hello", "TutorialsPoint", 78, "Hi", "Everyone"]
# getting list length
listLength = len(lst)
# Printing the size of a list
print("Size of thea List = ", listLength)
```

Size of thea List = 5

```
# 'APPEND' an element at the end of the list
fruitList = ["apple", "grapefruit", "cherry"]
fruitList.append("orange")
fruitList.append("strawberry")
print("New list ... ", fruitList)
```

New list ... ['apple', 'grapefruit', 'cherry', 'orange', 'strawberry']

```
# 'EXTEND' one list with another
firstList = ["apple", "banana", "cherry"]
secondList = ["mango", "pineapple", "papaya"]
firstList.extend(secondList)
print("Extended firstList ... ", firstList)
```

Extended firstList ... ['apple', 'banana', 'cherry', 'mango', 'pineapple', 'papaya']

```
# replace a range of elements
# from index #1 to index #3 (not including #3)
fruitList = ["apple", "grapefruit", "cherry"]
fruitList[1:3] = ["blackberry", "watermelon"]
print(" replaced [1:3] ... ", fruitList)
```

replaced [1:3] ... ['apple', 'blackberry', 'watermelon']

```
iceCream = ["rocky road", "vanilla", "chocolate"]
iceCream2 = ["strawberry", "cookie dough", "hazelnut"]
fullList = iceCream + iceCream2
multipliedList = iceCream + (iceCream2 * 2)
print(fullList)
print(multipliedList)
```

['rocky road', 'vanilla', 'chocolate', 'strawberry', 'cookie dough', 'hazelnut']
['rocky road', 'vanilla', 'chocolate', 'strawberry', 'cookie dough', 'hazelnut', 'strawberry', 'cookie dough', 'hazelnut']

```
# Sort a list using a 'key'
#   EG: sort by the length of the values in the list:
cars = ['Ford', 'Mitsubishi', 'BMW', 'VW']
# Define a function that returns the length of the values in the List:
def myFunc(e):
    return len(e)
cars.sort(key=myFunc)
print(cars)
```

['VW', 'BMW', 'Ford', 'Mitsubishi']

The .copy() method is a better, but Not Perfect option. It returns a shallow copy of the list; .copy() returns a new list, and it doesn't modify the original list.

The deepcopy() method is the safest option for making true, independent copies of compound List objects.

append()	Adds an element at the end of the list
clear()	Removes all the elements from the list
copy()	Returns a copy of the list
count()	Returns the number of elements with the specified value
extend()	Add the elements of a list (or any iterable), to the end of the current list
index()	Returns the index of the first element with the specified value
insert()	Adds an element at the specified position
pop()	Removes the element at the specified position
remove()	Removes the first item with the specified value
reverse()	Reverses the order of the list
sort()	Sorts the list

From <https://www.w3schools.com/python/python_ref_list.asp>

Adding curly brackets trim off duplicates from a list = {}

```
#Basic Sets actions
thisSet = {"apple", "banana", "cherry"}
print("thisSet ... ", thisSet)
# Duplicate values will be ignored:
anotherSet = {"apple", "banana", "cherry", "apple"}
print("anotherSet ... ", anotherSet)
```

```
thisSet ...  {'cherry', 'banana', 'apple'}
anotherSet ...  {'cherry', 'banana', 'apple'}
```

4.1 Python Logical Flow Control

Monday, October 23, 2023 7:07 PM

`If / Else` statements are used with Logical Comparison Operators

Comparison Operators

Operator	Name	Example
==	Equal *	a == b
!=	Not Equal	a != b
>	Greater Than	a > b
<	Less Than	a < b
>=	Greater than OR equal to	a >= b
<=	Less than OR equal to	a <= b

TypeError: '>' not supported between instances of 'str' and 'int'

```
number = input('Please pick a number between 0-100')
if number > 60:
    print('You passed!')
else:
    print('You failed :(')
```

>

```
number = int(input('Please pick a number between 0-100'))
```

```
number = int(input('Enter you age'))
if number >= 18:
    print('You are old enough to learn to drive.')
else:
    print('You are not old enough to drive')
```

>

```
else:
    print(f"You need to wait {18-number} years to drive")
```

```
# Calculate a letter grade score with IF ... ELSE
score = 76
if score >= 90: # grade is an A
    letter = 'A'
else:   # grade must be B, C, D or F
    if score >= 80:
        letter = 'B'
    else:  # grade must be C, D or F
        if score >= 70:
            letter = 'C'
        else:    # grade must D or F
            if score >= 60:
                letter = 'D'
            else:
                letter = 'F'
print("The score is: - ", letter)
```

>

```
if score >=90:
    print('A')
elif score >=80:
    print('B')
elif score >=70:
    print('C')
elif score >=60:
    print('D')
else:
    print('F')
```

```
# while loop example: How many times a given number can be divided
by 3 before it is less than or equal to 10.
```

```
count = 0
number = 180
while number > 10:
    number = number/3
    count += 1
print(f"{number} can be divided by {count} times before it's less
than 10")
```

In Python, an "f-string" stands for a "formatted string literal." It is a way to embed expressions or variables inside string literals, using curly braces {} within the string, and prefixing the string with an 'f' character. When you create an f-string, you can include variables and expressions inside it, and Python will replace them with their values when the string is evaluated.

```
name = "Alice"
age = 30
print(f"My name is {name} and I am {age} years old.")
```

```
dict = {'apple':10, 'banana':20, 'orange':2, 'grape':10, 'pear':3}
total_fruits = 0
dict.items()
#dict.keys()
#dict.values()
for key, value in dict.items():
    print(key, value)
    total_fruits = total_fruits + value    ----------------------------------------------------------------------------------->  total_fruits += value


print('Total fruits is: ', total_fruits)
```

```
apple 10
banana 20
orange 2
grape 10
pear 3
Total fruits is:  90
```

```
fruits = ["apple", "banana", "grape"]
for x in fruits:
    print(x)
    if x == "banana":
        break
```

The break will have it stop on the list

```
i = 1
while i < 6:
    print(i)
    if i == 3:
        break
    i += 1
```

=

```
1
2
3
```

```
i = 1
while i < 6:
    print(i)
    if i == 3:
        pass
    i += 1
```

=

```
1
2
3
4
5
```

4.2 Modules Functions

Monday, October 23, 2023 7:07 PM

Beautiful soup is a popular Python data scaping tool

```
# using Date Time
import datetime as dt
# Get Current Date and Time
a = dt.datetime.now()
print("Current Date and Time ...", a)
```

Current Date and Time ... 2023-10-24 20:07:12.942224

```
# Get just the Date
b = dt.date.today()
print("Just the Date ...", b)
```

Just the Date ... 2023-10-24

```
# Create a date object to represent a specific date
c = dt.datetime(2020, 5, 17)
print("Presenting a specific date ...", c)
```

Presenting a specific date ... 2020-05-17 00:00:00

```
# Find parts of the date string
from datetime import date
today = date.today()
# Print today's year, month and day
print("Current year:", today.year)
print("Current month:", today.month)
print("Current day:", today.day)
```

```
Current year: 2023
Current month: 10
Current day: 24
```

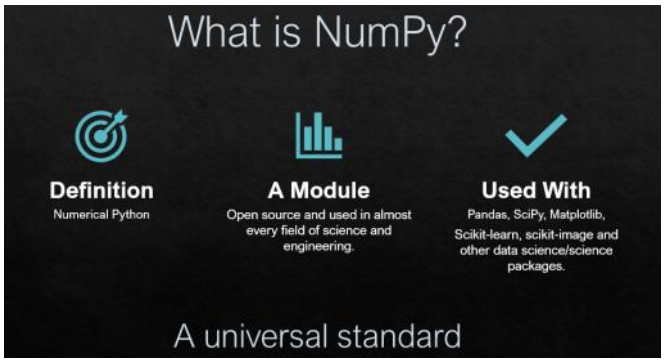
```
def familyName(fname):<----------(fname) is a temp variable
    print(fname + " Smith")
familyName("Jerry")
familyName("Amy")
familyName("Chad")
```

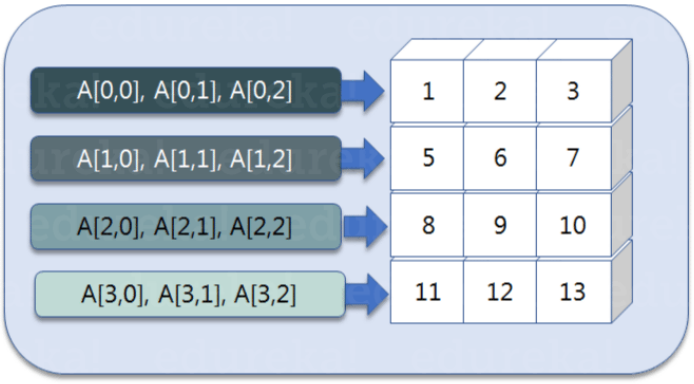
```
Jerry Smith
Amy Smith
Chad Smith
```

```
def say_hello():
    print("Hello, I'm a function")
say_hello()  <---------------------------------------------------------------------- without writing this at the end, it will not print
```

4.3 Arrays Intro To Numpy

Monday, October 23, 2023 8:58 PM





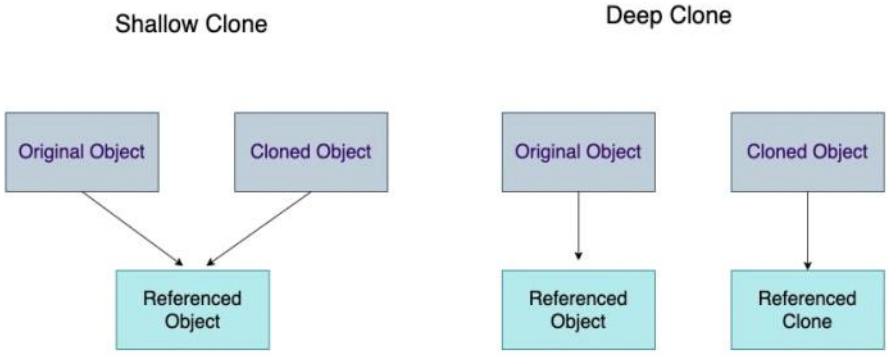
Useful NumPy keywords

- **ndarray**= N-dimensional array
- **dtype**= array data type
- **1-D**= one dimensional array
- **2-D**= two-dimensional array
- **3-D**= three-dimensional array
- **vector**= an array with a single dimension
- **matrix**= an array with two dimensions
- **tensor**= an array with 3+ dimensions
- **dimensions**= the number of axes of an array

\n = increases readability for codes

```
a_2d = np.arange(12).reshape((3, 4))
print("The a_2d array ...\n", a_2d)
```

```
The a_2d array ...
 [[ 0  1  2  3]
 [ 4  5  6  7]
 [ 8  9 10 11]]
```




```
# shallow copy example - REFERENCES REMAIN INTACT!
xArray = [[1, 2, 3], [4, 5, 6], [7, 8, 9]]
zArray = xArray.copy()
zArray[0][0] = 100
print("The xArray ...\n", xArray)
print("\nThe zArray ...\n", zArray)
```

Shallow copy-
(This changed the original)

```
The xArray ...
 [[100, 2, 3], [4, 5, 6], [7, 8, 9]]

The zArray ...
 [[100, 2, 3], [4, 5, 6], [7, 8, 9]]
```

```
# best way to DEEP copy a NumPy Array:
import copy
xArray = [[1, 2, 3], [4, 5, 6], [7, 8, 9]]
zArray = copy.deepcopy(xArray)
zArray[0][0] = 100
print("The xArray ...\n", xArray)
print("\nThe zArray ...\n", zArray)
```

Deep Copy-
(This is a safer method)

```
The xArray ...
 [[1, 2, 3], [4, 5, 6], [7, 8, 9]]

The zArray ...
 [[100, 2, 3], [4, 5, 6], [7, 8, 9]]
```

5.1 Numpy

Monday, October 23, 2023 7:06 PM

5.2 Pandas

Monday, October 23, 2023 7:08 PM

Allows us to ingest the data like a csv or excel doc and import it into Python

```
courses = pd.Series(["Spark","PySpark","Hadoop"])
fees = pd.Series([22000,25000,23000])
discount  = pd.Series([1000,2300,1000])
print(courses)
print(fees)
print(discount)
```

```
0      Spark
1    PySpark
2     Hadoop
dtype: object
0    22000
1    25000
2    23000
dtype: int64
0    1000
1    2300
2    1000
dtype: int64
```

^^^^ ---Using pandas wth .concat will help make a chart-- vvvv

```
courses = pd.Series(["Spark","PySpark","Hadoop"], name='courses')
fees = pd.Series([22000,25000,23000], name='fees')
discount  = pd.Series([1000,2300,1000], name='discount')
#print(courses)
#print(fees)
#print(discount)
df = pd.concat([courses, fees, discount], axis=1)
df
```

Courses - fees - discount
0 - Spark - 22000 - 1000
1 - PySpark - 25000 - 2300
2 - Hadoop - 23000 - 1000

```
index_labels = ['r1', 'r2', 'r3']

courses = pd.Series(["Spark","PySpark","Hadoop"], name='courses',
index=index_labels)
fees = pd.Series([22000,25000,23000], name='fees', index=index_labels)
discount  = pd.Series([1000,2300,1000], name='discount', index=index_labels)
fees.index = index_labels

#print(courses)
#print(fees)
#print(discount)

index_labels = []

#for i in range(1, 100):
#    index_labels.append('r'+ str(i))
#    print(index_labels)

df = pd.concat([courses, fees, discount], axis=1)
df
```

Courses - fees - discount
R1 - Spark - 22000 - 1000
R2 - PySpark - 25000 - 2300
R3 - Hadoop - 23000 - 1000

```
### Working with Dataframes ...
- Multiple ways to create a dataframe from scratch
- Great way is by using `dict`, then convert to a dataframe
    - Each (key:value) will correspond to a column
    - Default index provided, unless specified
```

To permanently sort a DataFrame, you should use the inplace=True parameter with the df.sort_values() method in pandas.

```
import pandas as pd
# Assuming you have a DataFrame named df
df.sort_values(by='column_name', ascending=True, inplace=True)
```

5.3 Ingesting Data

Monday, October 23, 2023 7:08 PM

```
pfDB = pd.read_sql_query('select * from artists',con)
```

Most common query

```
con = sqlite3.connect('./resources/PitchForkDatabase.sqlite')
```

Means to connect a file and open it

```
#### **Dropping the NULLs -- `.dropna()`**
- Pull-up: `data.csv` in the Resource folder
    - "Calories" column: No values (a.k.a. NULLS) in rows: 19, 29, 93, 120, 143
- `.dropna()` - Removes rows will NULL values
    - `dropna()` or `dropna(inplace=False)`: Removes NULLS in a new dataframe
    - `dropna(inplace=True)` - Removes NULLS in original dataframe
```

```
col_mean = round((df["Calories"].mean()), 2)
```

Gives nice round number

tuple : parenthesis ()		(0,5)
List : brackets []	=	([0,1,2,3], 4)
Dictionaries : {}		({0:10, 1:100},{'A':0, 'B':5},100)

`enumerate` = use when indexing such as

```
for index, duration in enumerate(duration_series):
    if duration > 120:
        df.loc[index, "Duration"] = 120
```

```
# '\n' is a string containing a newline character.
# r'\n' is a string containing a backlash and the letter n.
```


```
# '\n' is a string containing a newline character.
# r'\n' is a string containing a backlash and the letter n.
```

```
### NOTES: replace NULLS with MEAN
# Calculate the Mean (x = round(x, 2))
'''
The round() function returns a floating point number that is a rounded version of
the specified number,
 with the specified number of decimals. The default number of decimals is 0,
  meaning that the function will return the nearest integer.
'''
# col_mean = round((df["Age"].mean()), 2)
# print(col_mean)
# Replace NULLS with MEAN
# df["Age"].fillna(col_mean, inplace = True)
# print(df.to_string())
#---------------------------------------------
#Calculate the Median
col_median = df["Age"].median()
print(col_median)
#Replace NULLS with Median
df["Age"].fillna(col_median, inplace =True)
print(df.to_string())
# #---------------------------------------------
#Calculate the Mode
# mode() returns a dataframe with the mode values (calculates mode of each
column, but here we are specifying the column)
# col_mode = df["Age"].mode()[0]
# print(col_mode)
# Replace NULLS with Mode
# df["Age"].fillna(col_mode, inplace = True)
# print(df.to_string())
```

```
# '\n' is a string containing a newline character.
# r'\n' is a string containing a backlash and the letter n.
```

6.1- Whiteboard Exercise

Monday, October 30, 2023 6:38 PM

6.2- Python Web Data

Monday, November 6, 2023 6:29 PM

All HTTP addresses are Port 80 (which are like cubbies in a mailroom

JSON , XML, HTML are the main topics to this section

In an Element Tree:
- -Main branch
- -everything under that main branch is a child

JSON > BeautifulSoup4

```
# What is a b-string?

print('What does the Euro symbol look like to my computer?')
print('€'.encode('UTF-8'))

print()

print('What does the binary sequence E2 82 AC mean in UTF-8?')
print(b'\xE2\x82\xAC'.decode('UTF-8'))

print()

char = b'\x20'.decode('ASCII')
print(f'What is "{char}"?')
```

```
What does the Euro symbol look like to my computer?
b'\xe2\x82\xac'

What does the binary sequence E2 82 AC mean in UTF-8?
€

What is " "?
```

Finding the Regular Expressions

```
input_data = """
Restock is needed on SKU#938AC, SKU#83002, and SKU#776ZZ.
We are discontinuing SKU#A6511 and SKU#1023X, and possibly SKU#90877 by the end
of the year.
SKU#63881's special features need better support on the web interface.
"""

# Let's pull every SKU out of this message so we can subsequently
# request information on each one from the database.

import re

SKU_MATCHER = "SKU#[0-9]{5,5}"

found_skus = re.findall(SKU_MATCHER, input_data)

amt_found = len(found_skus)

print(f"{amt_found} SKUs matched the regular expression:")
print(found_skus)
```

```
3 SKUs matched the regular expression:
['SKU#83002', 'SKU#90877', 'SKU#63881']
```

6.3- Python MatplotLib

Monday, November 6, 2023 6:29 PM

MatplotLib is to help graph my data

BAR CHART

```
# notes for class example
#import packages
import pandas as pd
import matplotlib.pyplot as plt
#prepare data
labels = ['A', 'B', 'C']
values = [1,4,2]
#change graph size
plt.figure(figsize=(5,3), dpi=100)
#render set-up (discuss barh)
bars = plt.bar(labels, values, color=["Red","Blue", "Green"], edgecolor='Cyan')
#tweak --> place patters on bars
patterns = ['/', 'O', '*']
# for bar in bars:
#     bar.set_hatch(patterns.pop(0))
bars[0].set_hatch("/")
bars[1].set_hatch("O")
bars[2].set_hatch("*")

#save figure
plt.savefig('barchart.png', dpi=300)
#render graph
plt.show()
```

Stacked bar chart

```
import numpy as np
groups = np.array(['G1', 'G2', 'G3', 'G4', 'G5'])
values1 = np.array([12, 19, 14, 27, 16])
values2 = np.array([21, 30, 15, 17, 20])
values3 = np.array([5,3,6,10,7])
# Stacked bar chart
plt.bar(groups, values1)
plt.bar(groups, values2, bottom = values1)
plt.bar(groups, values3, bottom = np.add(values1,values2))

#render
plt.show()
```

PIE CHART

```
import matplotlib.pyplot as plt
import pandas as pd
import numpy as np
# prepare data & labels
df = pd.read_csv('./resources/Electric_Vehicle_Population_Data.csv')
x = df['Model'].value_counts().head(5)
labels = x.index.values.tolist()
labels
# render the data
plt.pie(x, labels=labels,autopct='%1.1f%%')
# # tweak
plt.figure(figsize=(8,6), dpi=300)
# #save
#plt.savefig('pie_example.png')
# #render
plt.show()
```

EDA

Thursday, November 9, 2023 8:11 PM

This is to label nulls (NaN) in data sets

```
df.isna()

df.isna().sum
```

```
df.dropna(inplace=True)  # Drop rows with missing values
df.fillna(0, inplace=True)  # Fill missing values with zeros
```

7.1 SQL

Monday, October 30, 2023 6:38 PM

What is SQL?

- SQL or Structured Query Language, is a programming language that allows users to interact with and manage relational databases.
- You can perform a number of actions with SQL including, but not limited to, creating databases, creating tables, updating information, retrieving information.

SQLite Storage Classes (Types)

NULL. The value is a NULL value.
INTEGER. The value is a signed integer
REAL. The value is a floating point value
TEXT. The value is a text string
BLOB. The value is a blob of data, stored exactly as it was input

In SQLite

1.
(creating tables)

```
-- CREATE TABLE "Animal"(
--         NumberOfLegs INTEGER,
--         Name TEXT,
--         LandOrSea TEXT
-- );
```

2.

```
INSERT INTO Person
VALUES("Freddie","Vo",26),
("Jane","Smith",29),
("John", "Doe", 40);

INSERT INTO Person("first_name",age)
VALUES("Freddie",26)
```

3.
(selecting table)

```
SELECT Statement
SELECT[column name]
FROM[TABLE NAME]

(to select everything from csv)
-- SELECT*
-- FROM evCharge

(to select certain things)
SELECT sessionId, dollars, created, ended
FROM evCharge
```

4.
(Selecting distinct rows with no duplicates)

```
-- SELECT DISTINCT userId
-- FROM evCharge
```

5.
(calculate to different number by multiplication)

1. I would like to know where all of the Model 3's are registered. Please give me a result set that contains all of the Cities and States where the Model 3's are registered.

```
-- SELECT *
-- FROM evRegistry

-- SELECT Model, City, State
-- FROM evRegistry
-- WHERE Model="MODEL 3"
```

2. Its important that I have enough range in my EV. What vehicles have more than 250 miles of range? Please show the make, model, and range in the output.

```
SELECT Model, Make, ElectricRange
FROM evRegistry
WHERE ElectricRange >250
```

```
-- SELECT 10+10 as "operation";

SELECT BaseMSRP,
        BaseMSRP * 0.94 as BaseMSRPEuro
FROM evRegistry
```

6.
(selecting certain parts in table by filtering)

```
SELECT *
FROM evRegistry
WHERE Make="FORD"
AND ElectricVehicleType="Plug-in Hybrid Electric Vehicle (PHEV)"
AND ModelYear BETWEEN 2015 AND 2019
```

(see the Euro value as an example)

```
SELECT *, BaseMSRP * 0.94 as BaseMSRPEuro
FROM evRegistry
WHERE Make="FORD"
AND ElectricVehicleType="Plug-in Hybrid Electric Vehicle (PHEV)"
AND ModelYear BETWEEN 2015 AND 2019
```

7.
(% is to help you find out where to find in table)

-% is to find everything before it
-% is to find everything after it
-%---% is to find everything that has it in between

```
SELECT *
FROM evRegistry
WHERE VIN like "%J3E%"
```

8.

(to find anything with the "IN" statement)

```
SELECT *
FROM evRegistry
-- WHERE State="NM" or State="VA" or State="CO"
```

(easier way)

```
WHERE State in ("NM","VA","CO")
```

7.2 SQL

Monday, November 6, 2023 6:30 PM

```
SELECT *
FROM  EVRegistry
WHERE Make = 'TESLA' AND (Model = "MODEL 3" OR Model = "MODEL Y")  ;
```

LIKE and Wild Cards

- LIKE can be used in the WHERE clause to find a specific pattern
- You will use the '%' to help define your pattern

```
SELECT *
FROM <table_name>
WHERE <column> LIKE 'abc%'
```

- 'abc%' will find all of the records that start with 'abc' in that column

WHERE Clause	Explanation
WHERE column LIKE 'abc%'	Searches for values that starts with 'abc'
WHERE column LIKE '%abc'	Searches for values that ends with 'abc'
WHERE column LIKE '%abc%'	Searches for values that contains with 'abc'
WHERE column LIKE '% abc___'	Searches for values that starts with 'abc' and is 6 characters long

(this will find things after NEW)

```
SELECT *
FROM evRegistry
WHERE County LIKE 'NEW%'
```

(this is to insert additional rows)

```
INSERT into EVRegistry
      (State, PostalCode, ModelYear, StateID)
Values
      ('PA',19130,2020,290)
```

```
THIS WILL NOT WORK

SELECT Make, Model, ModelYear
FROM EVRegistry
WHERE Make = NULL;
```

>

```
THIS WILL WORK (to see all nulls)

SELECT Make, Model, ModelYear
FROM EVRegistry
WHERE Make IS NULL;
```

or

```
THIS WILL WORK (to see any value that's not NULL)

SELECT Make, Model, ModelYear
FROM EVRegistry
WHERE Make IS NOT NULL;
```

BREAKOUT 1

1. Using the LIKE Operator, find the vehicle, and all its info, that has a VIN that starts with: 1N4AZ
2. Using the LIKE operator, find the vehicle, and all its info, that has 'GDEE' within the VIN number.

>

```
SELECT *
FROM  EVRegistry
WHERE VIN like "1N4AZ%"
```

```
SELECT *
FROM  EVRegistry
WHERE VIN like "%GDEE%"
```

ORDER BY Clause

- The order by clause is used to sort the result set in a particular way
- You are able to choose which attribute or column you would like to sort by
- The default sort is ASCENDING, but you can specifiy DESCENDING with DESC

>

```
SELECT column1, column2
FROM tablename
WHERE [condition]
ORDER BY column1 ASC|DESC;
```

EXAMPLE: (ASC is already a default order)

```
SELECT ModelYear, Make, Model, ElectricVehicleType, ElectricRange
FROM EVRegistry
WHERE Make = 'TESLA'
ORDER BY ModelYear, ElectricRange DESC
```

(You can limit how many you would like to see)

```
SELECT ModelYear, Make, Model, ElectricVehicleType, ElectricRange
FROM EVRegistry
WHERE Make = 'TESLA'
ORDER BY Make, ModelYear DESC
LIMIT 5
```

(RE-naming tables and columns)

Syntax for Column Alias

```
SELECT column_name AS 'Column'
FROM table
```

>

```
SELECT ModelYear AS "Model Year",
       ElectricRange AS "Range",
       Model
FROM EVRegistry
ORDER BY ModelYear, ElectricRange DESC
```

Syntax for Table Alias

```
SELECT column_name
FROM table AS 'Table'
```

GROUP BY

- The GROUP BY statement allows us to group our result set into summary

>

(this takes only one of the rows)

```
SELECT *
FROM evRegistry
GROUP by State
```

(this orders everything without removing)

```
SELECT *
FROM evRegistry
ORDER by State
```

Example:
(this will make a ordered or group by, but adding in how many is in the group by with COUNT)
*if using the count function and there's the same city in different states, then under group by = add in the value

```
SELECT City,
       State,
       count(*)
FROM evRegistry
GROUP by City, State
```

BREAKOUT 2

1. Select the Model Year, make, model, type, and range of the Tesla vehicles in the registry. Order the result set by Make as well as Model year in **DESCENDING** order.

```
SELECT ModelYear,
       Make,
       Model,
       ElectricVehicleType,
```

```
        ElectricRange
FROM evRegistry
ORDER by Make DESC, ModelYear DESC
```

2. Select the Model Year, make, model, type, and range of the Tesla vehicles in the registry. Order the result set by Make as well as Model year in **ASCENDING** order. Limit your result set to 10 rows.

```
SELECT ModelYear,
        Make,
        Model,
        ElectricVehicleType,
        ElectricRange
FROM evRegistry
WHERE Make = "TESLA"
ORDER by Make, ModelYear
LIMIT 10
```

3. Using EVCharging, Let's find out how many user's there are.

```
SELECT count(DISTINCT userId),
        Count(*) as Users
FROM evCharge
```

4. Using EVCharging, How many different stations did each user use. Show me the top ten users.

```
SELECT userId,
        Count(DISTINCT stationId)
FROM evCharge
GROUP by userId
ORDER by count(*) DESC
LIMIT 10;
```

For the folks who charged longer than one hour, show the min and max of the charging time for each user. Your output columns should be userid, minTime, and maxTime. Order this result set by the last two columns respectively.

>

(instead of typing out the function again, you can use numbers that's in the 'Select' column)

```
SELECT userId,
        MIN(chargeTimeHrs) as 'minhours',
        MAX(chargeTimeHrs) as 'maxHours'
FROM evCharge
WHERE chargeTimeHrs > 1
GROUP BY userId
ORDER BY 2,3
```

(Group_Concat will add another column to lay out all the missing information)

```
SELECT City,
        State,
        group_concat(State),
        Make,
        count(*)
FROM evRegistry
GROUP by City, State
ORDER by City
```

BREAKOUT 3

1. Select the min and max number of hours spent charging for each user.

>

```
SELECT
        userId,
        sum(dollars) as "money spent",
        sum(chargeTimeHrs) + round(sum(chargeTimeMins) / 60) as "hours
        charged",
        count(*) as "how many charging sessions?"
From evCharge
GROUP by userId
order by sum(dollars) DESC
```

7.3 SQL

Monday, November 6, 2023 6:30 PM

How to Join datasets will be covered in this sections

(Rounds things by 2 decimals)

SELECT ROUND(AVG(column1),2)
FROM table

-- sum the charge hours
-- group user id
-- sort in descending ORDER
-- limit 5

```
SELECT userId, sum(chargeTimeHrs) as "TotalChargeHours"
FROM EVCharging
group by userId
order by sum(chargeTimeHrs) DESC
limit 5;
```

UserID | TotalChargeHours

65023200	518.84
32751774	430.01
98345808	423.68
35897499	418.25
97867440	366.97

BREAKOUT 1

1. Each Charging location has multiple charging stations. Using the EVCharging table, Reveal the locationId and Find out how many charging stations there are at each Charging location and rename this column numStations. Order the result set so the location with the most stations appears first. Limit the output to 20.

```
SELECT locationId,
        Count(DISTINCT stationId) as numstations
from EVCharging
GROUP by locationId
ORDER by 2 DESC
LIMIT 20;
```

2. Using the EVCharging table, I would like to know the average power consumption per user. Please list the user identification and rename the aggregation column to avgPower. Round this number to 2 decimal places.

```
---
SELECT userId,  ROUND(AVG(chargeTimeHrs),2) as avgPower
from EVCharging
group by userId
```

3. Using the EVCharging table, Find the total power output from each charging location. You list the location identification and rename other column to totalpowerKWH Round the answer to 2 decimal points and list the out put in highest to lowest order. Limit the order to the top 10.

```
---
SELECT stationId, round(sum(kwhTotal),2) as totalpowerKWH
from EVCharging
group by stationId
order by 2 DESC
limit 10;
```

(Sum of the kwh is over 500)

```
select userId, sum("kwhTotal") as totalpower
from EVCharging
group by userId
having sum("kwhTotal") > 500
order by 2 desc
```

Userid | totalpower

35897499	1013.26
98345808	1006.11
90692118	870.92
78908148	808.66
97867440	736.67
65023200	725.36
81375624	709.55
82888443	673.98
32751774	659.84
37412595	646.12
46009656	588.96
30464676	578.07
50725917	534.67

BREAKOUT 2

1. Using the EVCharging table, Find the total time spent charging and total power output for each user.
You should have three columns: userId, totalTimeHrs, and totalPwrKWH.
Order the output from largest to smallest power consumption and limit the results to the top 5.

```
SELECT userId,
        sum("chargeTimeHrs") as totalTimeHrs,
        sum(kwhTotal) as totalPwrKWH
from EVCharging
group by userId
ORDER by  3 DESC
limit 5;
```

userId	totalTimeHrs	totalPwrKWH
35897499	418.25	1013.26
98345808	423.68	1006.11
90692118	268.64	870.92
78908148	140.59	808.66
97867440	366.97	736.67

2. Using the EVCharging Table, Find the total time spent charging (totalTimeHrs), and the total power consumed(totalPwrKwh)
from charging EV's by each User on Thursdays. Round the answer to 2 deciaml points and list the out put in highest to lowest order.
Limit the order to the top 25 users.

3. The EV charging firm is wondering which charging Stations are being used the least.
They would like to move these stations to a place with a greater need.
Please find the total number of hours (sumTotalHrs) that each station is used.
The output should contain all of the stations that have a total usage of less than 5 hours.

Foreign and Primary Keys

(This will help with conjoin tables)

- **PRIMARY KEY**:
  - The primary key uniquely identifies each record that exists in our tables.
  - The values are always unique and they are never NULL values.
- **FOREIGN KEY**:
  - The foreign key in one table refers to the primary key in a "connected" table.
  - The foreign key designation also helps prevent any action that could destroy the link between the two tables.

INNER JOIN

- The INNER JOIN allows you to create a result set that combines all of the matching rows between two or more tables.
- The result set of the INNER JOIN will not contain any rows that do not match the criteria.

```
(take the names from both tables)
SELECT tablename1.column1, tablename2.column2,...
FROM tablename1
INNER JOIN tablename2
ON tablename1.IDcolumn = tablename2.IDcolumn
```

```
select fc.facilityID, df.FacilityKey, df.typeFacility
from factCharge fc
inner join dimFacility df on fc.facilityID= df.FacilityKey
```

BREAKOUT 3

1. Using factCharge and dimDay, find out which day of the week has the highest average charging time? Return dayOfWeek and avgChargeTime. Please round avgChargeTime to two decimal places and order the result set from highest to lowest avgChargeTime.

(the = button will start matching everything to join together)

```
select dd.dayOfWeek, round(avg("chargeTimeHrs"),2) as avgcharge
from factCharge fc
inner join dimDay dd on fc.dayID = dd.dateKey
group by dayOfWeek
order by 2 desc
limit 1;
```

1. Using dimUser and factCharge, which app platform had the most amount of charging sessions. Return appPlatform and numCharges. Order the result set from highest to lowest number of charges.

8.1 SQL

Monday, October 30, 2023 6:38 PM

INNER JOIN more than two tables

```
SELECT tablename1.column1, tablename2.column2, tablname3.column3...
FROM tablename1
INNER JOIN tablename2
   ON tablename1.IDcolumn = tablename2.IDcolumn
INNER JOIN tablename3
   ON tablename1.IDcolumn = tablename3.IDcolumn
```

-- find total highest kwh by facility (dimFacility) on Wednesday(dimDay)

```
SELECT typeFacility, dayOfWeek, sum(kwhTotal) as totalcharge
FROM factCharge fc
INNER JOIN dimDay dd
   ON fc.dayID = dd.dateKey
INNER JOIN dimFacility df
   ON fc.facilityID = df.FacilityKey
GROUP by typeFacility, dayOfWeek
ORDER by 3 DESC
limit 5
```

typeFacility	dayOfWeek	totalcharge
Research and Development	Thursday	2442.85
Research and Development	Wednesday	2284.62
Research and Development	Tuesday	2153.0
Research and Development	Friday	1988.18
Research and Development	Monday	1780.3

1. Using dimUser and factCharge, which app platform had the most amount of charging sessions.
2. Return `appPlatform` and `numCharges`.
3. Order the result set from highest to lowest number of charges.

```
SELECT du.appPlatform, count(*) as numCharges
from factCharge fc
INNER JOIN dimUser du
        on fc.userId = du.userId
GROUP by appPlatform
ORDER by 2 DESC
```

appPlatform	numCharges
ios	2234
android	1155
web	6

Using factCharge, dimUser, dimDay, Let's find out the number of charges and the total time spent charging for each car make on Thursday's.
Return carMake, numCharges, timeChargeHrs and order the result set from highest to lowest time spent charging.

```
SELECT round(sum(fc.chargeTimeHrs), 2) as timeChargeHrs, du.carMake, dd.dayOfWeek, fc.userId
FROM factCharge fc
INNER JOIN dimUser du
   ON fc.userId = du.userId
INNER JOIN dimDay dd
   ON fc.dayID = dd.dateKey
WHERE dayOfWeek = "Thursday"
GROUP by carMake, dayOfWeek
order by 1 desc
```

or

<u>Using the "AND" in the "ON" statement</u>

```
SELECT round(sum(fc.chargeTimeHrs), 2) as timeChargeHrs, du.carMake, dd.dayOfWeek, fc.userId
FROM factCharge fc
INNER JOIN dimUser du
   ON fc.userId = du.userId
INNER JOIN dimDay dd
   ON fc.dayID = dd.dateKey and dayOfWeek = "Thursday"
GROUP by carMake, dayOfWeek
order by 1 desc
```

timeChargeHrs	carMake	dayOfWeek	userID
658.7	Kia	Thursday	30464676
551.32	Tesla	Thursday	26618922
171.42	Hyundai	Thursday	92283246
164.53	Ford	Thursday	24478344
104.0	BMW	Thursday	65023200
103.25	Mercedes	Thursday	86810130
88.03	Cheverolet	Thursday	75009330
72.61	Porshe	Thursday	90692118
57.01	Rivian	Thursday	33295482
34.15	Audi	Thursday	93202560
19.31	Polestar	Thursday	78533433
14.36	Lucid	Thursday	78908148
11.43	Volkswagen	Thursday	54832140

LEFT JOIN (Out-Join)

- LEFT JOIN is sometimes known as LEFT OUTER JOIN
- When preforming a LEFT JOIN you are bringing over all of the records from the "left table" and all of the matches from the right table.
- The left table is the table listed in the FROM Clause that you are joining the right table to.
- If there are row's from the left table with no matchs in the right table, NULL values will be inserted in its place.

>

```
SELECT tablename1.column1, tablename2.column2, tablname3.column3...
FROM tablename1 (left table)
LEFT JOIN tablename2
ON tablename1.IDcolumn = tablename2.IDcolumn
```

1. **Use left join to join `dimUser` and `dimCar`. I want to know how much each user paid for their car.**
2. **Please convert to USD.**
3. **Select the distinct users, carMake, the price in Euros multiplied by 1.10--> name this column `priceUSD`. order by price in desc order**

>

userId	carID	carMake	priceEuro	priceUSD
41493375	30101	Porsche	180781	198859.1
90692118	30101	Porsche	180781	198859.1
92911698	30101	Porsche	180781	198859.1
14260257	30011	Audi	125000	137500.0
92192265	30011	Audi	125000	137500.0

1. **Use left join to join `dimUser` and `dimCar`. I want to know how much each user paid for their car.**
2. **Please convert to USD.**
3. **Select the distinct users, carMake, the price in Euros multiplied by 1.10--> name this column `priceUSD`. order by price in desc order**

>

90692118	30101	Porsche	180781	198859.1
92911698	30101	Porsche	180781	198859.1
14260257	30011	Audi	125000	137500.0
92192265	30011	Audi	125000	137500.0
78908148	30071	Lucid	105000	115500.0
68581656	30133	Tesla	85990	94589.0
81295434	30133	Tesla	85990	94589.0
81375624	30133	Tesla	85990	94589.0
81701631	30133	Tesla	85990	94589.0

```
SELECT du.userId, du.carID, dc.carMake, dc.priceEuro, dc.priceEuro*1.10 as priceUSD
FROM dimUser du
LEFT JOIN dimCar dc
    ON du.carID = dc.carID
ORDER BY 5 desc
```

Finding out the whats in the string values

```
SELECT substr(dayofWeek, 1,3) from dimDay
```

substr(dayofWeek, 1,3)
Mon
Tue
Wed
Thu
Fri
Sat
Sun

TRIM()

- The trim function can help in two ways. It can remove white spaces on either side of the string or if you designate a character, it can remove that specific character from either side of the string.

```
SELECT TRIM(string, character) as trimmedString;
```

```
SELECT appPlatform, TRIM(appPlatform, "i") as trimmedString
from dimUser
where appPlatform = "ios"
```

>

appPlatform	trimmedString
ios	os
ios	os
ios	os
ios	os
ios	os
ios	os
ios	os
ios	os
ios	os
ios	os

Length()

- The length function returns the number of characters of a string.

Finding out length of a column

```
SELECT length(dayofWeek), count(*)
from dimDay
GROUP by 1
```

length(dayofWeek)	count(*)
6	3
7	1
8	2
9	1

Replace()

- This function allows you to replace all occurences of a specified string with another string that you designate.

```
SELECT Replace('I miss my dog', 'dog', 'cat') as replaceString
```

replaceString
I miss my cat

UPPER() & LOWER()

- UPPER(): THIS FUNCTION REQUIRES ONE PARAMETER. IT WIL RETURN THE SUPPLIED STRING IN ALL UPPER CASE LETTERS.
- LOWER(): this function requires one parameter. it wil return the supplied string in all lower case letters.

```
SELECT UPPER(string) AS upper;
SELECT LOWER(string) AS lower;
```

```
SELECT LOWER('SqL RoCks') as lowerString, UPPER('SqL RoCks') as upperString;
```

lowerString	upperString
sql rocks	SQL ROCKS

Concatenate with ||

- This operator is used to join two strings into one string.
- Most SQL flavors support the use of the concat() function. However, SQLite does not support this.

```
SELECT string1 || string2 AS combinedString;
```

```
SELECT dayAbbr || 'day'
FROM dimDay
WHERE dayAbbr = 'Mon';
```

dayAbbr || 'day'
Monday

UPDATE Statements

- The update statements are used to modify existing records in the tables.
- Use caution when executing update statements because you are changing the data
- Prior to executing an UPDATE statement, use a SELECT with the same conditions to view all the data you are going to make changes to before you make updates.
- Take note of how many rows you selected with your select statement. You can use this to confirm that you changed the correct amount of rows.

```
UPDATE tablename
SET column1 = 'value', column 2 = 'value'
WHERE condition;
```

>

```
SELECT appPlatform
from dimUser
where appPlatform = "ios"

UPDATE dimUser
set appPlatform = "Apple"
where appPlatform = "ios"

SELECT appPlatform
from dimUser
```

appPlatform
ios
ios
ios
android
ios
ios
ios
ios
ios
android

>

appPlatform
Apple
Apple
Apple
android
Apple
Apple
Apple
Apple
Apple
android

RENAME COLUMN

```
ALTER TABLE
RENAME COLUMN oldName to newName;
```

>

```
alter table dimUser
RENAME distanceHome to distancetoWork
```

8.2 SQL

Monday, November 6, 2023 6:30 PM

Case Statement

```
SELECT "column name"
    CASE
        WHEN "condition"
            THEN "value"
        WHEN condition
            THEN "value"
        ELSE
    END
FROM "table name"
```

-6.1 Visualize the Powertrain records

- Write a query that selects PowerTrain and counts all the records. (HINT: Remember GROUP BY from SQL Lesson 7.2)
- Take note of the counts for each unique attriute. You should use this to make sure that you are changing the correct number of rows with your update statement.

--write sql code here

- 6.2 Please fill in the blank on your .md answer sheet

- look at the three DISTINCT values from the query you wrote in 6.1 and fill in the blanks.
- If the PowerTrain equals _____ then I want you to change the value to 'AWD'
- If the PowerTrain equals _____ then I want you to change the value to 'RWD'
- If the PowerTrain equals _____ then I want you to change the value to 'FWD'

- 6.3 Write three update statements for the three different conditions

--write sql code here

- 6.4 Write a query to Select all of the records to view your changes.

--write sql code here

>

```
-- 6.1
SELECT PowerTrain, count(*)
from evCars
GROUP by PowerTrain

-- 6.2
-- 6.3
SELECT PowerTrain,
    CASE
        WHEN PowerTrain = "All Wheel Drive"
            THEN "AWD"
        WHEN PowerTrain = "Front Wheel Drive"
            THEN "FWD"
        WHEN PowerTrain = "Rear Wheel Drive"
            THEN "RWD"
    END as abbr
FROM evCars


-- 6.4
UPDATE evCars
SET PowerTrain = CASE
        WHEN PowerTrain = "All Wheel Drive" THEN "AWD"
        WHEN PowerTrain = "Front Wheel Drive" THEN "FWD"
        WHEN PowerTrain = "Rear Wheel Drive" THEN "RWD"
        END
```

8.3 API

Monday, November 6, 2023 6:30 PM

pip install python-dotenv

Create a ".env" file to store your API key

Librarians (API)

The librarians act as the API, handling the communication between the clients and the server resources. They receive requests from clients, validate and process them, and then fetch the required data or perform the requested actions on behalf of the clients.

Use Cases for APIs

APIs are ubiquitous in modern web applications. Here are a few examples of what you can do with APIs:

- Retrieve data from a database or other resources.
- Post or update data in a database.
- Authenticate users and manage user accounts.
- Communicate with other servers or services.
- Power real-time services like chat applications or game leader boards.

Python Requests

The requests library is a simple yet powerful HTTP library for Python. It allows you to send HTTP requests with various methods like GET, POST, and others. With requests, you can send HTTP requests in Python with just a few lines of code.

Python-Dotenv

Next up is python-dotenv. This library allows you to read key-value pairs from a .env file and add them to the environment variables. It's a great way to handle sensitive data, like API keys, that you don't want to hard-code into your scripts.

Pandas

pandas is a powerhouse in the world of data manipulation. It provides data structures and functions needed to manipulate structured data... This should sound familiar from the early weeks! It's particularly useful for its DataFrame object, which is like a spreadsheet in Python and can be easily exported to a CSV file. This is what we'll use to convert the data after we receive it from the API

JSON

Last but not least, we have json. This is a standard Python library for working with JSON data. You'll use it to parse the JSON data you receive from the API, as this JSON format is not very useful for Database related functionality, but does provide all the parent-child relationship data we need to convert it into a CSV file, Excel spreadsheet, or even a database!

HTTP Response Status Codes

When we send a request to a server, it responds with a status code. This code tells us whether the request was successful, and if not, why not. Here are some common status codes:

- 200: OK. The request was successful.
- 404: Not Found. The server could not find the requested resource.
- 500: Internal Server Error. The server encountered an error and could not complete the request.

You can access the status code of a Response object using the .status_code attribute. For example:

```
print(response.status_code)
```

Excel Bonus

Wednesday, November 22, 2023 9:06 PM

Converting PDF to Excel

Excel > Data > get data > PDF > import > choose table > transform data > close and load > select rows we need > copy > new sheet > transpose paste

9.1 API

Monday, October 30, 2023 6:38 PM

Ctrl + L : clear
Ctrl + S: save
Ctrl + 1 : goes back to menu from terminal
Ctrl + N : makes a new file
Ctrl + B : Show or hide file browser
F2: over highlight name of file on VScode to change name
Ctrl + Shift + V : Make a preview for a markdown file

In terminal to run python codes

Type "python" and then python file on the same line

e.g.
python 9.1-ErrorHandling.py

Type "quit()" in terminal: If you get into ">>>" by typing python

Exporting a DataFrame to a CSV File

To export a DataFrame to a CSV file, pandas provides the to_csv() function. This function allows you to specify the file path and other parameters, such as the delimiter and whether to include the index.

Here's an example of how to export a DataFrame to a CSV file:

```
Import panda as pd
# Assume we have a DataFrame called 'df'
df.to_csv('data.csv', index=False)
```

9.2 Tableau 1

Tuesday, November 28, 2023 6:56 PM

Data Source Page

The Left Pane

- **Green and Purple Boxes Top Left of Data Source Image Below**
- Displays the connected data source and other details about your data
- The **purple box** is where you can add more connections to th data source to create cross database joins.
- The left pane does not display for cube (multidimensional) data.

Canvas

- **Blue Box** of Data Source Image
- Consist of two layers
  - **Logical Layer**: The canvas opens with the logical layer, where you can create relationships between logical tables.
  - **Physical Layer**: Double-click a table in the logical layer to go to the physical layer of the canvas, where you can add joins and unions between tables.

Metadata Grid

- **Red Box** of Data Source Image
- Displays the fields in your data source

Data grid

- **Yellow Box** of Data Source Image
- Displays first 1,000 rows of the data contained in the Tableau data source.

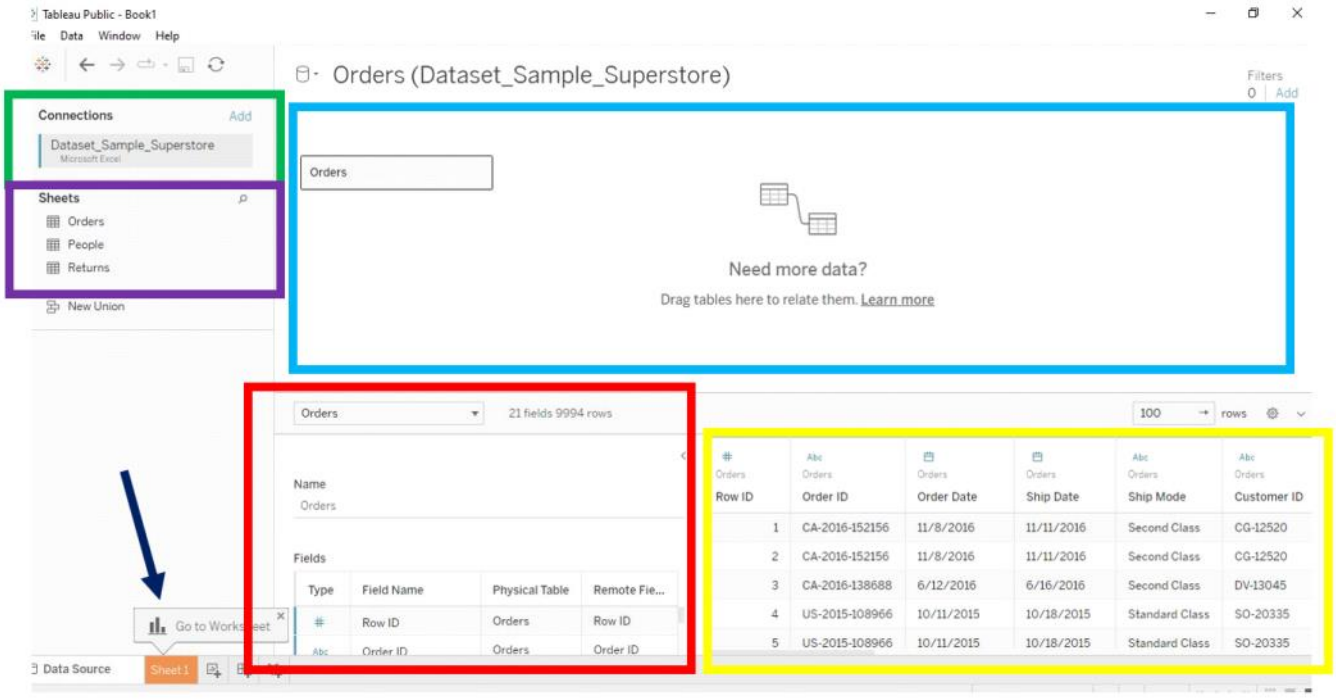


Tableau Sheets

Quick Access Toolbar

- **Green Box** in image below

Data Pane

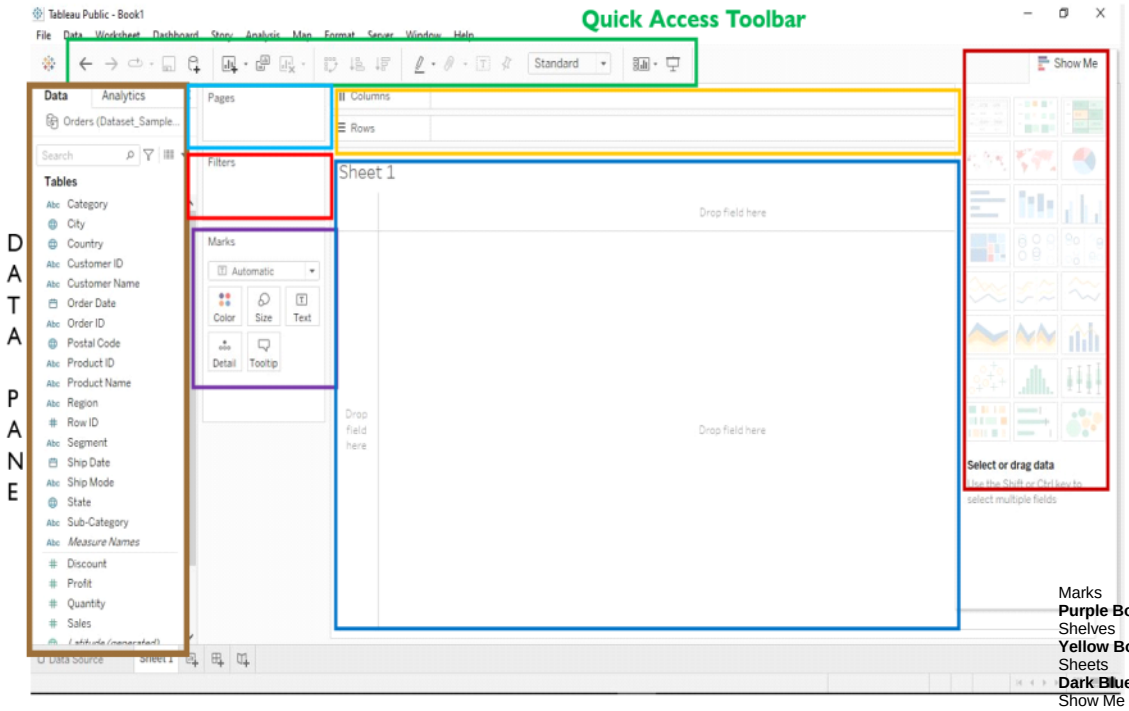
- **Brown Box** on the left of image

Pages

- **Light Blue Box** center left

Filter

- **Bright Cherry Box** below Pages



Marks
Purple Box
Shelves
Yellow Box
Sheets
Dark Blue Box
Show Me
Red Box

9.3 Tableau 2

Tuesday, November 28, 2023 6:56 PM

SPLITTING COLUMNS

- The [**Split**] function is used to split a column into multiple ones
- Example: Moving “City, State: Denver, CO” to two different cells
- It's used to make data analysis easier
- It offers both Automatic Split and Custom Split
    - Automatic: Done by detecting a common separator
    - Custom: Allows a max of 10 new fields based on a separator in original field

To Split a Column:

- Right-click on the desired column in the Preview Pane and select [**Split**]

10.1 Tableau 3

Monday, October 30, 2023 6:38 PM

10.2 Tableau 4

Tuesday, November 28, 2023 6:57 PM

Elevator Pitch

Tuesday, October 17, 2023 6:35 PM

~~How's it going? I'm Freddie Vo. I proudly served in the US Army as a mechanic until 2017 and then as a graduate from NIU with bachelors of Marketing by 2021.~~

~~Upon transitioning to civilian life, I ventured into the realms of sales and marketing within the real estate and insurance industries. I found immense satisfaction in utilizing CRMs and diverse databases to connect with clients which leads to my true calling as I discovered my passion for data analytics.~~

~~At present, I'm actively engaged in a bootcamp with Savvy Coders that encompasses Agile, Python, SQL, and data visualization which I anticipate to graduate from this program by December.~~

~~My goal is to leverage my newfound skills with a growth mindset to pursue a fulfilling career in the data analytics world, where I can make data-driven decisions and contribute to meaningful insights for organizations and clients.~~

Hey there, I'm Freddie Vo. I've had a unique professional journey that's taken me from serving in the US Army as a mechanic to graduating with a bachelor's in Marketing from NIU.

After transitioning to civilian life, I dived into sales and marketing within the real estate and insurance industries. It was there that I discovered my true passion for data analytics, finding joy in connecting with clients through a CRM database such as Salesforce.

To further develop my analytic skills, I enrolled in the Saavvy Coders bootcamp.

My ultimate goal is to apply my newfound skills with an Agile growth mindset in the data analytics field, where I can make data-driven decisions or visualizations for your company and provide valuable insights for the organization.

Barbe Rodriguez:

Keywords for Target Role | Your Target Industry/Area of Expertise | Your Unique Value

Such as: Project Manager | Agile | Scrum Master | Technology Industry | Managed projects for Samsung, Instacart, and Airbnb

Experience: Make sure your resume conveys how your past accomplishments are valuable to the role you are applying for. Show the reader how you can make a difference in their organization. An easy way to remember this is through the P.A.R.I.S. framework:

- Problem that needed to be solved Action(s)
- I took Result of action(s)
- Impact on project (users, quality, etc.)
- Supporting evidence (awards, bonus, etc.)

Notes

Thursday, December 7, 2023 8:34 PM

Always send a thank you note after an interview
Always write down notes and look down answers to their questions ; include this in the thank you note
---
Find out the Key Takeaway on resumes, like I found this insight and this is how this was implemented.

I want to work with people who are open minded, where I would take humility a little to find answers to subjects I'm not well inversed in. Always asking questions and levels of training in different areas. Always feel curious to learn with having a growth mindset and given opportunities.

Technical Interview: Q&A on if I would to use SQL statement, what operating system would I use

1. If theres a skill that I've used, talk about it
2. If it's a skill that's similar like Power BI and Tableau, explain
3. If I don't know just say that I'm not knowledgeable in it but willing to learn

Sarah Ramrup on LinkedIn to ask about interview questions or need help finding a connection
Can I ask you about the skills in the industry

Bring up excel skills, python libraries, tableau charts and basic sql skills

- SQL : try to learn subqueries and common table expressions
- Excel : learn xlookup, vlookup, and concatonate
- Tableau : https://www.tableau.com/learn/certification/desktop-specialist
- PowerBI : take powerBI course for data visualization (https://learn.microsoft.com/en-us/credentials/certifications/exams/pl-300/)
- Google Analytics : if want to be a marketing analyst (https://analytics.google.com/analytics/academy/)

Brandon Ceniceros:

The Work Opportunity Tax Credit is a federal tax credit available to employers who hire and retain qualified veterans and other individuals from target groups that historically have faced barriers in securing employment. By creating economic opportunities, this program also helps lessen the burden on other government assistance programs.

Usajobs.com (great source for veterans to find jobs for retirement)

Interview Prep: In-Person Interview

Monday, October 30, 2023 6:38 PM

Preparation

- Review Your Resume
- Review the Job Description
- Review STAR Interview Prep document
- Research company by going to the company website. Be able to speak to some of the company's strengths or major accomplishments. Use this information to form some of your questions.
- Ask yourself, why you would want to work for this company and then make certain you have done the research to answer that question.
- Ask yourself, what I need to know before I can accept this position, and then come prepared with those questions written out.
- Dress/Smoking
  - Interview Dress is always business professional. It is more important to look crisp than it is to wear a jacket and tie. Make certain you are wearing clothes that fit well and that are current.
  - Do not smoke on the way to the interview or outside of the building prior to the interview.
- Know the interviewer
  - Use LinkedIn to look up the people you will be interviewing with on LinkedIn to get a feel for their background, interests, connections, etc.
- Prepare a thank you note
- Bring With you…
  - A note Pad, with paper, with your questions written out
  - 3 copies of your resume- this should be the same version the interviewer has

Actual interview

- Show up 15 minutes early. If you are not 15 minutes early, some manager will consider you late. If you arrive earlier, please wait until about 15 minutes prior to the interview before going in.
- Leave your cellphone in the car!
- When you meet the interviewer, have a firm handshake. It lets them know you that you are there for business. Call the interviewer by their first name.

- Early in the conversation ask the interviewer:
    - What is important to you as you're making your hiring decision? And then USE this information to apply your background, skills and capabilities for the position

- Provide real life examples

- Be able to talk about your experience without looking at the resume. Say "I", not "We" as much as possible. It speaks to your personal contribution to the project. They're looking to hire YOU, not your previous team(s).

- Be honest- if you don't have a particular skill, express willingness to learn new technologies and give an example of how you've done that in the past

- Be yourself- we spend 40+ hours with the people we work with. If someone makes a joke, it is ok to laugh. They need to know they are going to enjoy you as a person.

- Remember the role you are interviewing for
    - Try to make certain your examples line up with the role you are interviewing for. If you cannot provide an example with relevant experience that is fine, but try as often as you can to provide experiences that match the role.

- Ask for clarity if needed. Sometimes you get a question and there is more than one way to answer it. Ask for clarity if you need it.

- Rambling- If you feel like you are talking too much, you probably are. It is ok to wrap up and ask the interviewer if you have answered there question.

- Ask Your Questions
    - What makes someone successful in this group?
    - Why is this position available?
    - What is the greatest challenge in this position?
    - How do the applications you are working on affect other areas of the company?
    - Could you share with me a little about your experience and background?
    - What can I learn to help me "hit the ground running"?
    - What are the group goals for the year?
    - Be prepared to talk about your resume without referring to it and to address any gaps in the resume.

- Wrapping up the Interview
    - Do you have any concerns with my ability to do the job well?
        - This is your opportunity to overcome any objection they might have. No one will be better qualified to sell your skillset than you. Open the dialogue, address any concerns.
    - Ask what their timeline or process will be to make a final decision.
    - Show interest in the position- Make sure they know that you are interested in the position. Your goal is to receive an offer; you can decide whether you want the job at that point

Post interview

- Call us following the interview:
  - We will discuss the interview, we will talk about the types of questions that were asked, what your impression was of the interviewers, what your impression was of the company.

- Send us a hank you note for us to forward on:
  - You can have your thank you note 90% pre-written. Leave yourself room to customize your response, but if we can get it over to them quickly, it will impress them. No one has ever said, wow they got me that thank you note too fast.

51 Great Questions to Ask in an Interview

Tuesday, December 12, 2023 6:55 PM

Questions to Ask About the Job

First, make sure you have a handle on exactly what the day-to-day responsibilities of the job will be—both now and in the future.

1. What does a typical day look like?
2. What are the most immediate projects that need to be addressed?
3. Can you show me examples of projects I'd be working on?
4. What are the skills and experiences you're looking for in an ideal candidate?
5. What attributes does someone need to have in order to be really successful in this position?
6. What types of skills is the team missing that you're looking to fill with a new hire?
7. What are the biggest challenges that someone in this position would face?
8. What sort of budget would I be working with?
9. Is this a new role that has been created?
10. Do you expect the main responsibilities for this position to change in the next six months to a year?

Questions to Ask About Training and Professional Development

Think of each new job not just as a job, but as the next step on your path to career success. Will this position help you get there?

11. How will I be trained?
12. What training programs are available to your employees?
13. Are there opportunities for advancement or professional development?
14. Would I be able to represent the company at industry conferences?
15. Where is the last person who held this job moving on to?
16. Where have successful employees previously in this position progressed to?

Questions to Ask About Your Performance

Understanding how your potential new manager will measure your success is key in both understanding the company priorities, as well as their managerial style.

17. What are the most important things you'd like to see someone accomplish in the first 30, 60, and 90 days on the job?
18. What are the performance expectations of this position over the first 12 months?
19. What is the performance review process like here? How often would I be formally reviewed?
20. What metrics or goals will my performance be evaluated against?

Questions to Ask About the Interviewer

Asking questions of the interviewer shows that you're interested in them as a person—and that's a great way to build rapport.

21. How long have you been with the company?
22. Has your role changed since you've been here?
23. What did you do before this?
24. Why did you come to this company?
25. What's your favorite part about working here?

Questions to Ask About the Company

Why not learn a little bit about where you might work. Because a job isn't just about your day-to-day to-do list.

26. I've read about the company's founding, but can you tell me more about...?
27. Where do you see this company in the next few years?
28. What can you tell me about your new products or plans for growth?
29. What are the current goals that the company is focused on, and how does this team work to support hitting those goals?
30. What gets you most excited about the company's future?

Questions to Ask About the Team

The people you work with day in and day out can really make or break your work life. Ask some questions to uncover whether it's the right team for you.

31. Can you tell me about the team I'll be working with?
32. Who will I work with most closely?
33. Who will I report to directly?
34. Can you tell me about my direct reports? What are their strengths and the team's biggest challenges?
35. Do you expect to hire more people in this department in the next six months?
36. Which other departments work most closely with this one?
37. What are the common career paths in this department?

Questions to Ask About the Culture

Is the office buttoned-up conservative or a fly-by-the-seat-of-your-pants kind of place? Learn the subtle, but oh-so-important, aspects of company culture.

38. What's the company and team culture like?
39. How would you describe the work environment here—is the work typically collaborative or more independent?
40. Can you tell me about the last team event you did together?
41. Is there a formal mission statement or company values? (Note: Make sure this isn't Google-able!)
42. What's your favorite office tradition?

43. What do you and the team usually do for lunch?
44. Does anyone on the team hang out outside the office?
45. Do you ever do joint events with other companies or departments?
46. What's different about working here than anywhere else you've worked?
47. How has the company changed since you joined?

Questions to Ask About Next Steps

Before you leave, make sure the interviewer has all of the information they need and that you're clear on the next steps by asking these questions.

48. Is there anything that concerns you about my background being a fit for this role?
49. What are the next steps in the interview process?
50. Is there anything else I can provide you with that would be helpful?
51. Can I answer any final questions for you?

STAR Method Interview Prep & Sample Questions

Tuesday, December 12, 2023 7:00 PM

Sample Questions and Examples:

1. Relationships and Networks

- Talk about a time when you had to work closely with someone whose personality was very different from yours.
- Give me an example of a time you faced a conflict while working on a team. How did you handle that?
- Describe a time when you struggled to build a relationship with someone important. How did you eventually overcome that?
- Give me an example of a time when you were able to successfully persuade someone to see things your way at work.

2. Courage and Candor

- Describe a time when you had to interact with a difficult client. What was the situation, and how did you handle it?
- Tell me about a time you needed to get information from someone who wasn't very responsive. What did you do?

3. Agility

- Describe a time when your team or company was undergoing some change. How did that impact you, and how did you adapt?
- Tell me about the first job you ever had. What did you do to learn the ropes?
- Tell me about when the budget or priorities changes mid-stream.

4. Initiative and Foresight

- Describe a time when you saw some problem and took the initiative to correct it rather than waiting for someone else to do it.
- Tell me about a time you were dissatisfied in your work or the work of your team. What could have been done to make it better?

5. Results Orientation

- Tell me about a time you had to be very strategic in order to meet all your top priorities.
- Describe a long-term project that you managed. How did you keep everything moving along in a timely manner?
- Sometimes it's just not possible to get everything on your to-do list done. Tell me about a time your responsibilities got a little overwhelming. What did you do?

Laurie Wilson

Tuesday, December 12, 2023 6:58 PM

- Updating LinkedIn profile frequently
- Help the interviewer understand what I'm able to do
- Why do you want to work for the company?
- Look at their career page and research about the company
- What kind of environment will I be working in such as will this be a team based environment where there is a project manager supervising the entirety of the team?
- Keep asking questions to get the role, always be curious
- Job descriptions are terrible since they are reused over the years
- Tell me about a time when, such as taking data over many data sources and combining it into one
- Do NOT say "I think you answered all my questions"
- Always write a thank-you note to the recruiter or manager to help you stand out
- Ask these questions (do this for each interview):
    - "What is important to you to recruit someone for the data analyst position?"
    - "What can I do to get on the ground running to get this role for you?"

50strong

Thursday, December 14, 2023 2:21 PM

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Connect with me on Linked In at linkedin.com/in/seth-peterson-veteran

See you in the breakout room!

Hey all Wells Fargo doesn't have chat capabilities but here's their email militaryrecruiting@wellsfargo.com

John Deere - We want to make it simple for you and ask you to fill out a contact card at https://www.Deere.com/JDMHP. We will connect you with a John Deere veteran to discuss all potential options/matches.
https://about.deere.com/en-us/careers/military-hiring-program

Michael McCoy From Verizon. We are excited to see you here and look forward to the conversation with you in our breakout rooms. https://www.linkedin.com/in/michaelsmccoy/

Jack Herlofsky

Thursday, December 14, 2023 6:41 PM

Always checking in with a recruiter

Keep getting certificates into particular industries like (health, real estate, business, ect.)