

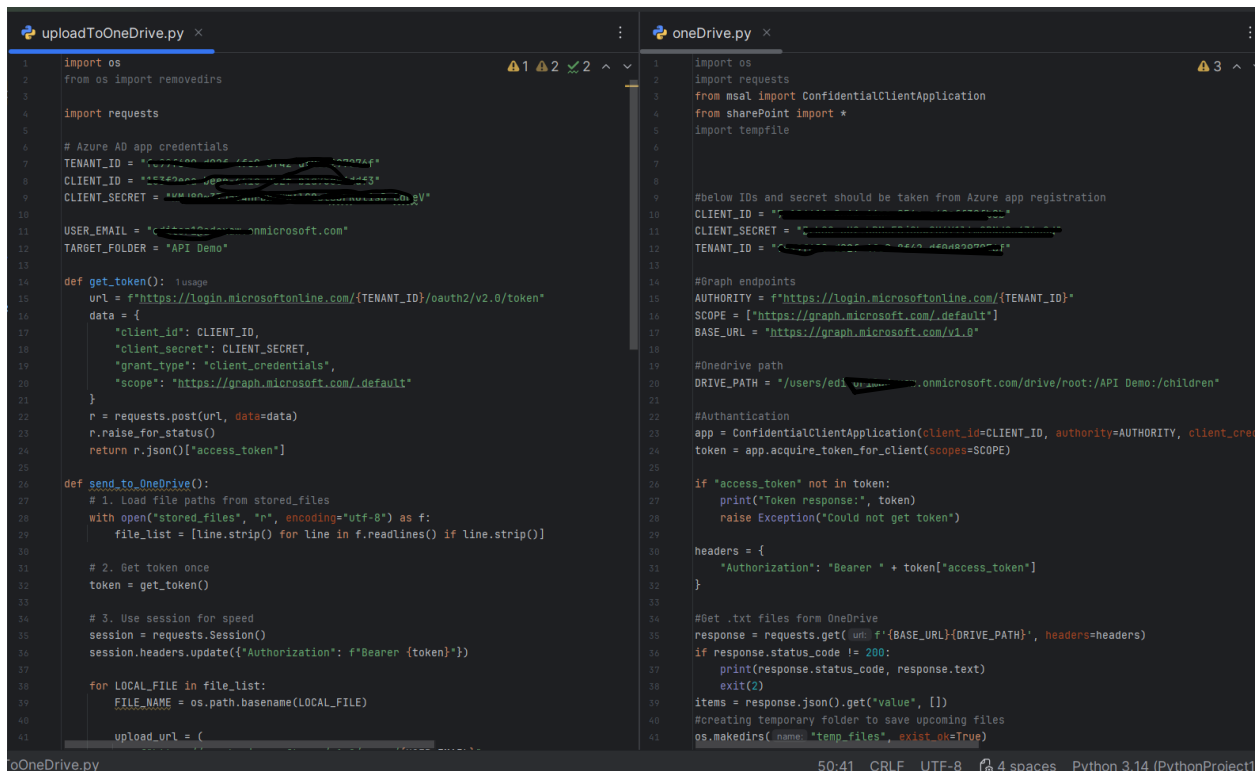
Shokhzod Khazratkulov
khazratkulovshokhzod@gmail.com
+998504504182

Hi there! Below I will write short story about my last work experience at Automated Design Express (ADeX) company in Kuala Lumpur, Malaysia. Some of the Projects and Problems I have worked with. I decided to use only Microsoft Word documents to present this because I cannot show or upload Projects on GitHub. I will provide screenshots of interfaces and code logics. Follow this [link](#) to see our company agreement.

First agreement period

The first program in first 3 months

In May 2025, I was asked to build IoT program that does download live data files from IoT (Internet of Things) sensors. Files contain data about temperature. Because they were doing this manually, every time they need data, they use flash cards or USB cables to transfer files. I did this program using Python, Azure applications APIs and Rest APIs. Below you may see the screenshot of coding logic.



```
uploadToOneDrive.py
1 import os
2 from os import removedirs
3
4 import requests
5
6 # Azure AD app credentials
7 TENANT_ID = "xxxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx"
8 CLIENT_ID = "xxxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx"
9 CLIENT_SECRET = "xxxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx"
10
11 USER_EMAIL = "xxxxxxxx@xxxxxxxx.onmicrosoft.com"
12 TARGET_FOLDER = "API Demo"
13
14 def get_token():
15     url = f"https://login.microsoftonline.com/{TENANT_ID}/oauth2/v2.0/token"
16     data = {
17         "client_id": CLIENT_ID,
18         "client_secret": CLIENT_SECRET,
19         "grant_type": "client_credentials",
20         "scope": "https://graph.microsoft.com/.default"
21     }
22     r = requests.post(url, data=data)
23     r.raise_for_status()
24     return r.json()["access_token"]
25
26 def send_to_OneDrive():
27     # 1. Load file paths from stored_files
28     with open("stored_files", "r", encoding="utf-8") as f:
29         file_list = [line.strip() for line in f.readlines() if line.strip()]
30
31     # 2. Get token once
32     token = get_token()
33
34     # 3. Use session for speed
35     session = requests.Session()
36     session.headers.update({"Authorization": f"Bearer {token}"})
37
38     for LOCAL_FILE in file_list:
39         FILE_NAME = os.path.basename(LOCAL_FILE)
40
41         upload_url = (
oneDrive.py
1 import os
2 import requests
3 from msal import ConfidentialClientApplication
4 from sharePoint import *
5 import tempfile
6
7
8 #Below IDs and secret should be taken from Azure app registration
9 CLIENT_ID = "xxxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx"
10 CLIENT_SECRET = "xxxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx"
11 TENANT_ID = "xxxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx"
12
13 #Graph endpoints
14 AUTHORITY = f"https://login.microsoftonline.com/{TENANT_ID}"
15 SCOPE = ["https://graph.microsoft.com/.default"]
16 BASE_URL = "https://graph.microsoft.com/v1.0"
17
18 #Onedrive path
19 DRIVE_PATH = "/users/edlxxxxxxxx.onmicrosoft.com/drive/root:/API Demo/children"
20
21 #Authentication
22 app = ConfidentialClientApplication(client_id=CLIENT_ID, authority=AUTHORITY, client_credentials=CLIENT_SECRET)
23 token = app.acquire_token_for_client(scopes=SCOPE)
24
25 if "access_token" not in token:
26     print("Token response:", token)
27     raise Exception("Could not get token")
28
29 headers = {
30     "Authorization": "Bearer " + token["access_token"]
31 }
32
33 #Get .txt files from OneDrive
34 response = requests.get(url=f'{BASE_URL}{DRIVE_PATH}', headers=headers)
35 if response.status_code != 200:
36     print(response.status_code, response.text)
37     exit(2)
38 items = response.json().get("value", [])
39 #creating temporary folder to save upcoming files
40 os.makedirs(name="temp_files", exist_ok=True)
```

On the left side of the screen, I used API to upload files to OneDrive. On the right side, I used code to get OneDrive's credentials. Sensors upload data into AWS cloud. From AWS cloud to OneDrive and should be stored into SharePoint. Next screenshot is about how to store upload to MS SharePoint. I used [office365 User credentials](#). Files shouldn't be updated but they should keep original format, so I had to check for file names and upload only non-existent files. Because SharePoint was only working with data and did work on them not OneDrive.

```

import os
import requests

from office365.runtime.auth.user_credential import UserCredential
from office365.sharepoint.client_context import ClientContext

site_url = "https://[REDACTED].sharepoint.com/sites/APIDemo"
USERNAME = "[REDACTED].onmicrosoft.com"
PASSWORD = "[REDACTED]"

credentials = UserCredential(user_name=USERNAME, password=PASSWORD)
content = ClientContext(site_url).with_credentials(credentials)

# Upload a file
def upload_files_to_sharepoint(file): 1 usage
    """This function uploads files to the SharePoint"""
    target_folder = content.web.get_folder_by_server_relative_url("/sites/APIDemo/Shared I
    with open(file, 'rb') as file_obj:
        name = os.path.basename(file)
        target_file = target_folder.upload_file(name, file_obj.read())
        content.execute_query()

    print(f"File {name} uploaded successfully!")

def get_file_names(): 1 usage
    """This function takes exist names from SharePoint
    and returns a list of file names to check with OneDrive files"""
    target_folder = content.web.get_folder_by_server_relative_url("/sites/APIDemo/Shared I
    sharepoint_files = target_folder.files
    content.load(sharepoint_files)
    content.execute_query()
    existing_names = [f.properties["Name"] for f in sharepoint_files]
    return existing_names

```

Problems faced

1. After 6 months I had done the project, I was asked to link to the other company's AWS cloud server to get data. Problem was that their program code logic was not understandable for me. So, I had a pressure that what if I made a change that it fails and stop their flow working. I took responsibility in the hard time and copied their code and made changes and trained myself for any cases that I may face.

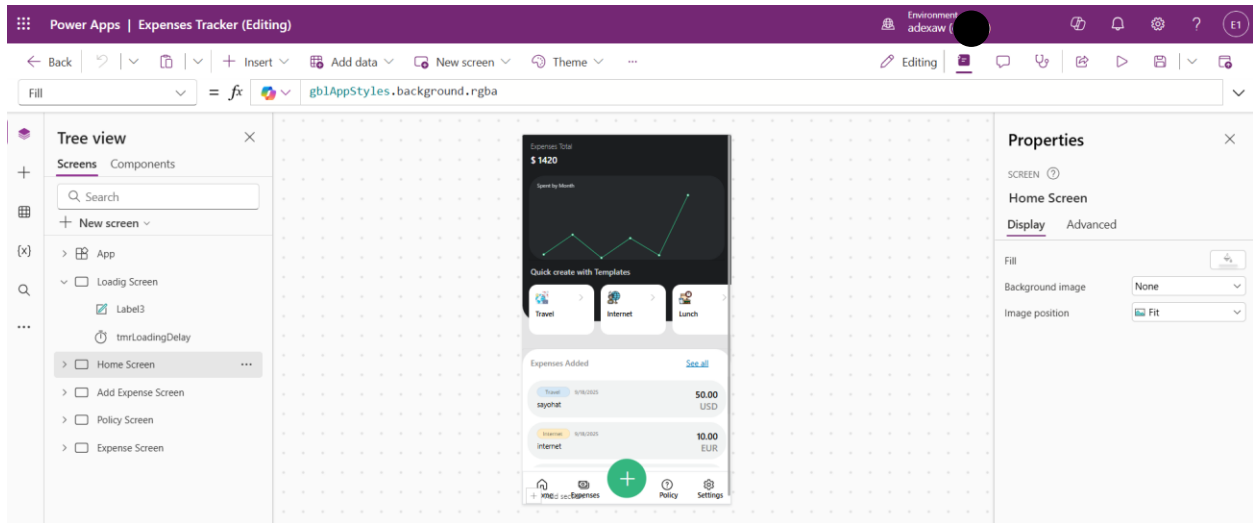
Fortunately, I did it! Now this program is ready to use in projects. Outcome of this program is that I build simple automation that reduces human manual actions.

2. In the Azure application program, I had to get the client credentials like client secret client ID. at that time I had to set a timer that this client ID and the secret active for 3, 6, 12, and 24 months. Six months after six months the credentials expired after six months when I ran the program it gives error so I was challenged how to solve this error, my boss was disappointed in me. Because he thought this program may not work again. Then I identified the problem and learned its documentation carefully and found I should set the expiration date manually, so I went to other Azure platform and created other credentials and the ID. The outcome from this challenge was that Problem can look like big, but when you take action you can solve it.

3. After finishing the project, I have to document how I built this program step by step and how to solve the problems if they are cursed again. Because when I finish my intern there they need to use this program again. The problem was I didn't know how to do documentation so 1st I tried to to learn myself, but I found out which is better if I asked any of my coworkers to teach me. The outcome was that if I need help, I shouldn't hesitate to ask.

The Second project in the first 3 months

My company usually uses Microsoft Power platforms to build their projects, for example, power apps, power automate, Azure, SharePoint, OneDrive. To build app 1st we need to site in SharePoint to store data then we can create app in power apps, so I learn SharePoint 1st. My major is data analyst so I work with the data and how to store them, where to store them, how to look them up, connection between tables, that's why learning SharePoint was very useful because at that time I had to learn how to do lookups and how to make a list. After that I started the project that my first really early app in power apps named expense tracker.



This app stores all my expenses that show smart chart that updates live when I add new expenses. This app was built by using PowerApps and Microsoft Dataverse as a database.

Edit table

+ New row | + New column | Refresh | Edit table properties

Expense Tracker dataverses

ID	Description	Date	Total	Currency	Category	Status	Created By
c6d901d6-f293-f011-b4cc-000d3...	sayohat	9/18/2025	50.00	USD	Travel	In-Progress	# Editor 1
481155ea-f293-f011-b4cc-000d3a...	internet	9/18/2025	10.00	EUR	Internet	In-Progress	# Editor 1
ce1abd38-d24b-f011-877a-00224...	new internet set	6/10/2025	120.00	EUR	Internet	In-Progress	# Editor 1
2d1a3490-d24b-f011-877a-00224...	trip to Singapore	6/26/2025	150.00	EUR	Travel	In-Progress	# Editor 1
38be377f-d54b-f011-877a-00224...	Having lunch	6/18/2025	20.00	EUR	Lunch	In-Progress	# Editor 1
b0c8f1ad-d54b-f011-877a-00224...	some extra expenses	5/7/2025	20.00	EUR	Travel	In-Progress	# Editor 1
40f6b1d3-d54b-f011-877a-00224...	other expenses	4/15/2025	250.00	EUR	Others	In-Progress	# Editor 1
4e9b28f8-d54b-f011-877a-00224...	Chinese Restaurant	3/12/2025	50.00	EUR	Lunch	In-Progress	# Editor 1
c6dcd210-d64b-f011-877a-00224...	Car repair	2/24/2025	750.00	EUR	Others	In-Progress	# Editor 1

Close

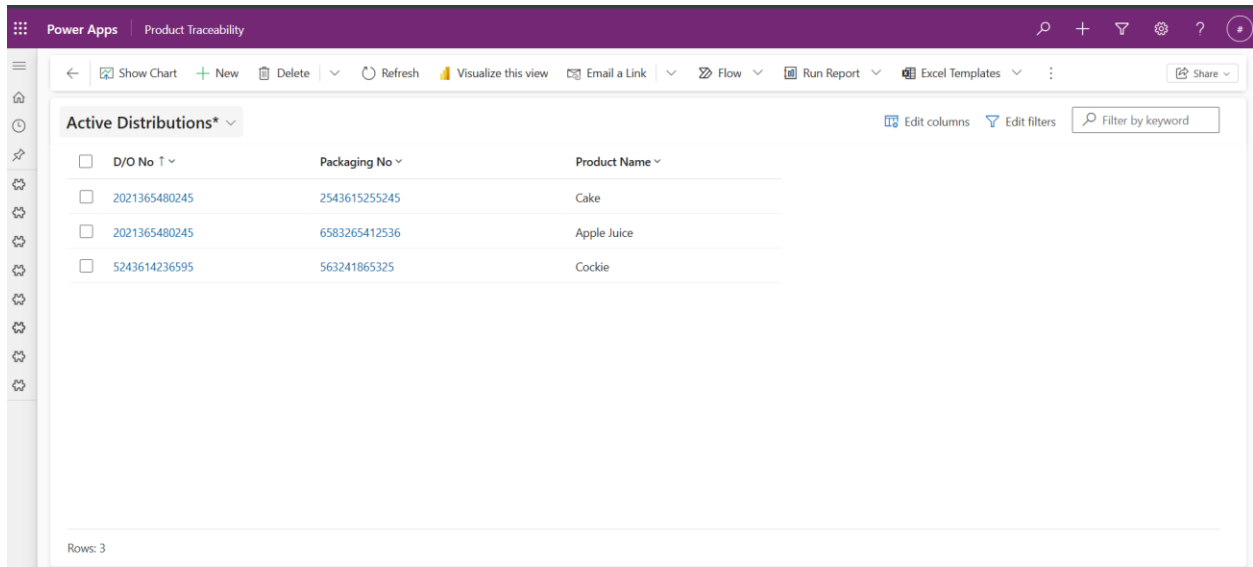
Problems I faced

- Before I started this project I had no idea how to do it and how to learn so I found the course to learn from online platforms. Then I started but the course was very old two years ago and because of the Microsoft updates power apps functions so it didn't match the with my current interface. Then I start learn from official [powerapps documentation](#). Outcome is that documentation is only latest version after updates and it is easy to solve the problems.

The third project in the first 3 months

Product Traceability app

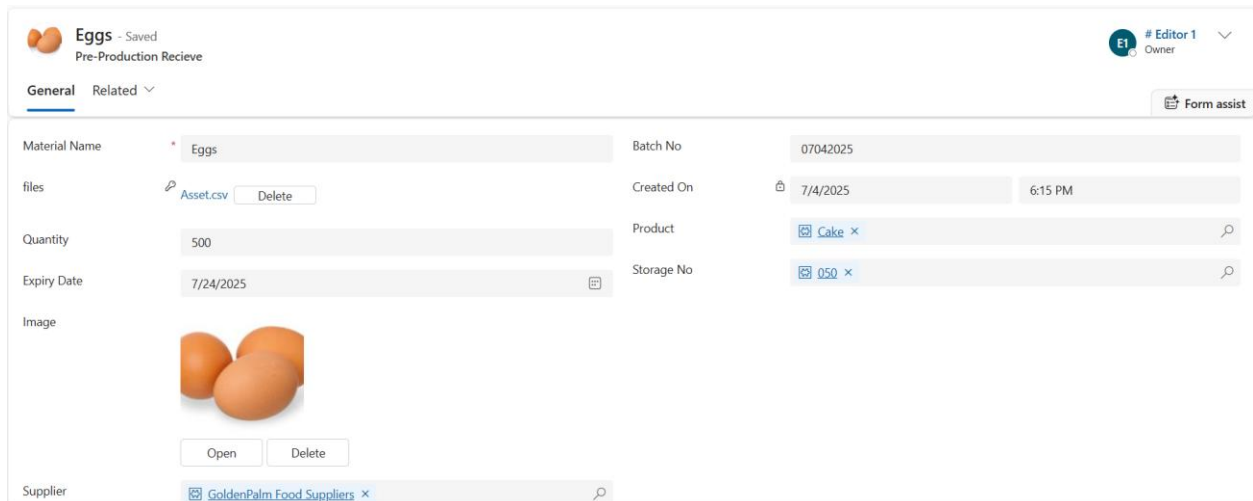
In this project I had to build App to trace our product at any point of process. From Shops to Distributor to Packaging to Production to Pre-Production Storage to Ingredients Supplier by using D/O no or Packaging No.



The screenshot shows the 'Product Traceability' app interface in Power Apps. It features a table titled 'Active Distributions*' with three columns: 'D/O No', 'Packaging No', and 'Product Name'. The table contains three rows of data. The interface includes a top navigation bar with 'Power Apps' and 'Product Traceability' tabs, and a sidebar with various app icons. The table has a 'Rows: 3' indicator at the bottom.

<input type="checkbox"/>	D/O No ↑	Packaging No	Product Name
<input type="checkbox"/>	2021365480245	2543615255245	Cake
<input type="checkbox"/>	2021365480245	6583265412536	Apple Juice
<input type="checkbox"/>	5243614236595	563241865325	Cockie

Customers can track their product to ingredients suppliers. For example, I scanned the barcode of the product one cake and I can't track that product what type of ingredient it was used what type of chemicals it was used to package this project includes everything.



The screenshot shows the 'Eggs' record form in the 'Product Traceability' app. The form is titled 'Eggs - Saved' and 'Pre-Production Recieve'. It includes a 'General' tab and a 'Related' tab. The form fields are organized into two columns. The left column contains 'Material Name' (Eggs), 'files' (Asset.csv), 'Quantity' (500), 'Expiry Date' (7/24/2025), and 'Image' (a photo of three eggs). The right column contains 'Batch No' (07042025), 'Created On' (7/4/2025 6:15 PM), 'Product' (Cake), and 'Storage No' (050). The 'Supplier' field at the bottom is set to 'GoldenPalm Food Suppliers'.

Material Name	Batch No
Eggs	07042025

files	Created On
Asset.csv	7/4/2025 6:15 PM

Quantity	Product
500	Cake

Expiry Date	Storage No
7/24/2025	050

Supplier: GoldenPalm Food Suppliers

Problems I have faced

1. Data structure was problem for me because I was told to use MS Dataverse as a database. The relationship between tables was quite complex because while they connect easily many to one or one to many relationships I also needed many to many relationships. Dataverse tables connect differently in many to many relationships. On YouTube or Internet, I couldn't find any information about how to connect many to many relationship in Dataverse. After several days of searching for information about relationships in the Dataverse tables, I found I can do this only model-driven apps in power apps. Model driven apps are quite different than canvas app so it was new for us also but fortunately this was like a new invention for our company that we can go with the model driven app rather than spending several months on building our canvas app. Power apps suggests prebuilt model-driven structure. So, we don't need to build our canvas app interface. Outcome was that I learned that sometimes problems can lead to new inventions.
2. Another problem was how to create table structure to build a relationship between tables so I just used the SharePoint lists and excel sheets already stored data and import to Dataverse table. From the documentation and the videos, I learned them easily solve this problem while we were struggling doing it manually.

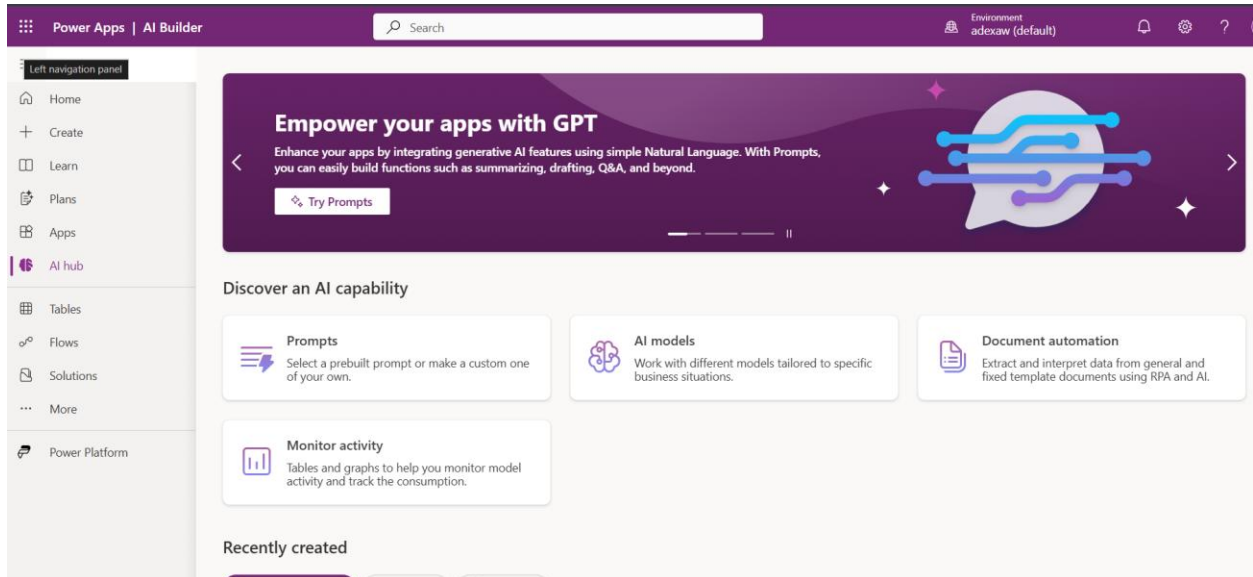
First project in second 3 months full-time internship

SIRIM Certification Project

After finishing my first part time internship contract my boss came to me and talk to me that Could I help him to get [SIRIM AI Management certification](#). This world recognized certificate can improve his sales, and using AI in our projects can improve productivity as well. The problem was that no one was aware of AI. So I had to take responsibility even our team spending big amount of time and energy. If I'm unsuccessful this is going to be big fail in my life. But I took a responsibility that learn the AI builders and teach my team and lead this project. After several

discussions and the suggestions, we came up with these AI builders and AI agents that specifically should be trained based on our data. We also looked at Azure API AI agents, but I found them unsafe.

Power Apps AI builder



We can provide our data as a version of only Dataverse tables. But our data was inside the Microsoft SharePoint lists, so we imported all the data into the diverse tables and used them to train AI builders.



Work Order AI

Changes will apply everywhere this prompt is used and could impact existing behavior.

Instructions

Model: GPT-4.1 mini Test

User = Text input

You are universal AI model to answer all questions about Work Order. Answer based on the data given below.

- Work Order.Action ✓
- Work Order.Approval ✓
- Work Order.Asset ID ✓
- Work Order.Asset Name ✓
- Work Order.Assigned To (External) ✓
- Work Order.Assigned To (Internal) ✓
- Work Order.Attachments ✓
- Work Order.Cause ✓
- Work Order.Date Schedule ✓
- Work Order.DateStart ✓
- Work Order.Department ✓
- Work Order.Due Date ✓
- Work Order.Exchange Rate ✓
- Work Order.External Cost ✓
- Work Order.External Cost (Base) ✓
- Work Order.Failure ✓
- Work Order.Frequency ✓
- Work Order.Location ✓
- Work Order.Man hour ✓
- Work Order.Man hour cost ✓
- Work Order.Meter PM Frequency ✓
- Work Order.Meter-Based/Time-Based ✓
- Work Order.New Schedule Date ✓
- Work Order.New Service Reading ✓
- Work Order.Overdue Date ✓
- Work Order.PM Code ✓
- Work Order.Position ✓
- Work Order.Priority ✓
- Work Order.Problem ✓

+ Add content 1 input

After providing data and instructions this air works based on the data we provide and takes the user input and gives the output.



Risk rater AI for GE Records

Changes will apply everywhere this prompt is used and could impact existing behavior.

Instructions > Inputs

Text input

Name

Text input

Sample data

what is the highest GE record

Model response Knowledge used

Output: Text

The highest GE record value is RM1,000.00 provided by Martha Soares in the Sales department for a "Dinner for client's family" under the Entertainment category. The approval status is Pending, and the recipient is Goh Kuang Sou (Customer).

Problems I have faced

1. The first problem we have faced is that limits. We got several errors that shows that we are out of the token. I solved this problem by keeping editing the instruction because every time when I update the instruction saves the builder as a new then I

can run AI builder inside my project. As well as we went through the other agents for example prediction models based on our data, it gives the future predictions, in this training I got 99% accurate prediction.

Details

Published version

Summary

Performance

Data influence

Warnings (1)

D

Your model's r-squared is 99%. This can be a sign that it included its final outcome data when training. [Try removing the most influential column.](#) [Learn more about model grades and scores.](#)

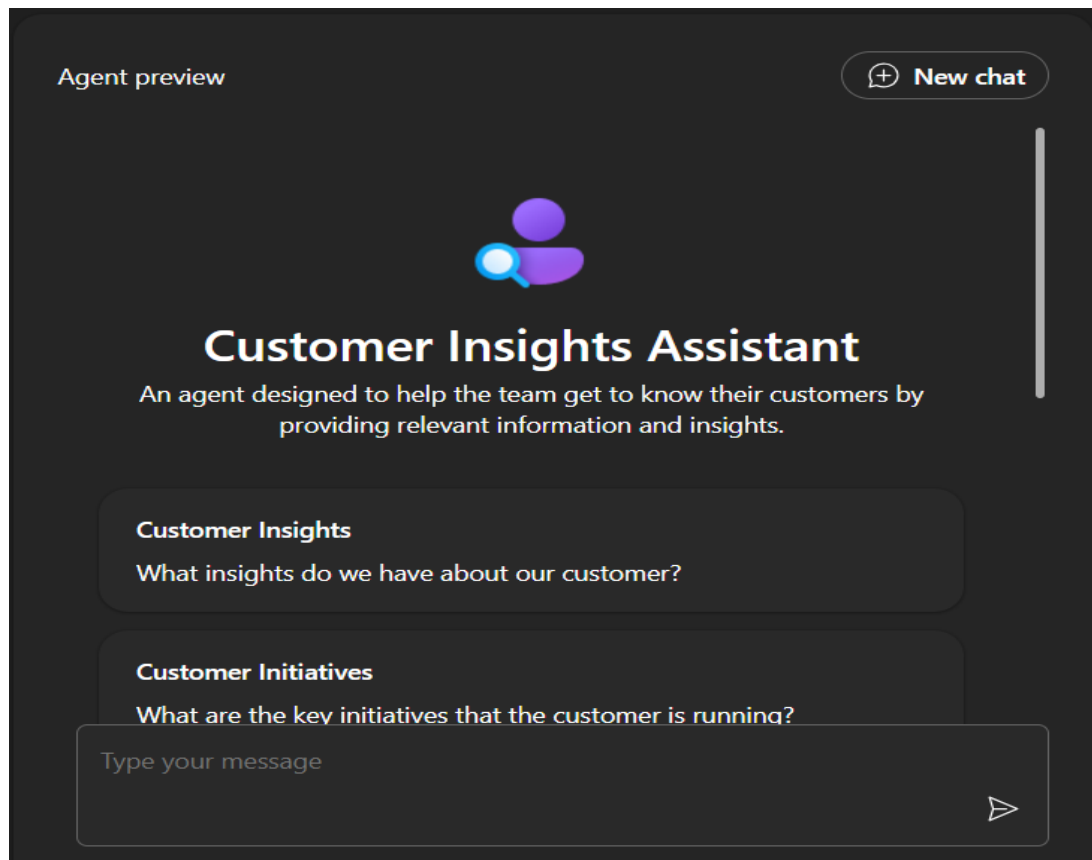
What your model's grade means

Your model's r-squared

99%

This shows the goodness of the fit - how well your model's predictions fit the actual data. The closer to 100% the better. [Learn more.](#)

2. The other problem is the pricing, Microsoft compiles judo has prebuilt super powerful agents they cost every month 200 USD you can create your own custom agent or you can use prebuilt agent. I give you a suggestion to our team we can use free AI builders to present our project to the clients to have imagination about how AI can make powerful their project If they pay copilot studio subscription.



We were successful in this project and were the first and only company that owns SIRIM AI Management system certified. Below you will find me and my boss sharing gift at the end of our agreement.



You have seen briefly what I did last 6 months of my part-time and full-time internship. I couldn't show everything because of the company policies. Thanks!