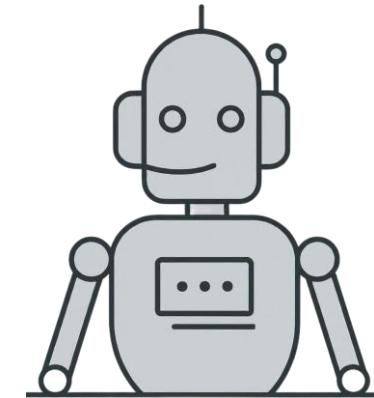


Generative AI for Office Productivity



Mid-Term Project
Mike Lively



Mike Lively
Founder QuantumAI
Trainer, IT Evangelist,
Developer
@mikelively-quantumai



16 Azure Cloud Certs



About Me

Father of Nine
Working on a PhD in GenAI
Teaching AI for Johns Hopkins & GK
Avid Hacker & Prompt Engineer
40 years programming, Keynote
Flautist
YMCA Gym Rat

PhD “ABD”



Mike's Groups



Michael L Lively

eaglelandsonce

81 followers · 10 following

Edit profile

Settings

https://www.meetup.com/florenc...

AI & ML interests

Quantum AI

Recent Activity

Updated a Space 1 day ago
eaglelandsonce/AI_Growth_Mindset_Wh...

Published a Space 1 day ago
eaglelandsonce/AI_Growth_Mindset_Wh...

Spaces 652

↑↓ Sort: Recently updated

Running

AI Growth Mindset Wheel



Play a team quiz on growth mindset with an AI wheel

eaglelandsonce

Running

AI Use Case Millionaire



Play an AI quiz to test your knowledge on real-world AI use cases

eaglelandsonce

Running private

Presentation Tool



Presentation Tool

eaglelandsonce

Running private

Presentation Version3



eaglelandsonce

Running

Snakegameforfun



Play the classic Snake game on your device

eaglelandsonce

Runtime error

Snake



eaglelandsonce

View 652 Spaces

<https://huggingface.co/eaglelandsonce>



ICE Breaker

If you could choose a bot to enhance your efficiency, which one would it be?



Inbox Genie

Drafts & triages
in seconds



Schedule Sage

Finds the perfect
time, instantly



Report Rocket

From notes to
polished reports



Flow Automator

Connects apps,
kills busywork



Brainstorm Buddy

Ideas on tap—
no blank pages

Agenda



- Use Case
- Project Objectives
- Data First
- Project Flow
- Key Tasks to Complete
- LLM Setup and Dataset Loading (Walk Through)
- Using Prompt Engineering
- Project Submission Process
- Copilot M365



<https://www.linkedin.com/pulse/why-add-agent-michael-lively-tv6ue/>

The AI Email Secretary: From Inbox Chaos to Executive Action

INBOX CHAOS



Security Vulnerabilities & Client Escalations!



Alex Carter, Senior Manager, faces a high-stakes inbox, struggling to focus on critical decision-making.

THE MODULAR AI PIPELINE

STEP 1: YESTERBOX FILTERING & CLASSIFICATION



Category	Description
! Urgent & High-Priority	Immediate action required today.
! Deadline-Driven	Time-sensitive requests or meeting needs.
i Routine & Informational	Updates and data that can be deferred or delegated.

STEP 2: CRITICAL INSIGHT GENERATION

SUMMARY: Client X Escalation (Contract issue).
NEXT STEPS: Review terms, schedule call by EOD.



SUMMARY:
Client X Escalation (Contract issue).
NEXT STEPS:

STEP 2: CRITICAL INSIGHT GENERATION

Automatically generates summaries and identifies Next Steps for urgent and deadline-driven items.

STEP 3: AUTOMATED RESPONSE DRAFTING

DRAFT 1: Acknowledgment & Action Plan for Client X.

DRAFT 2: Meeting Confirmation for Project Y.



STEP 3: AUTOMATED RESPONSE DRAFTING

Produces professional, context-aware first-response drafts for all critical emails to reduce manual effort.

EXECUTIVE OVERSIGHT & CONTROL

THE EXECUTIVE DASHBOARD



Workload Patterns:
 Urgent (25%)
 Deadline (45%)
 Routine (30%)

MUST-DO ITEMS
 Review & Send Client X Response
 Approx Security Patch Plan
 Team Sync for Project Z

Produces professional, context-aware first-response drafts for all critical emails to reduce manual effort.



LLM-AS-A-JUDGE EVALUATION

Scores AI outputs on a 1-5 scale for Relevance, Clarity, and Actionability.



DETERMINISTIC PROCESSING

Uses a temperature setting of 0 to ensure consistent and reliable AI responses.

Mid-Term Project

Project Objectives



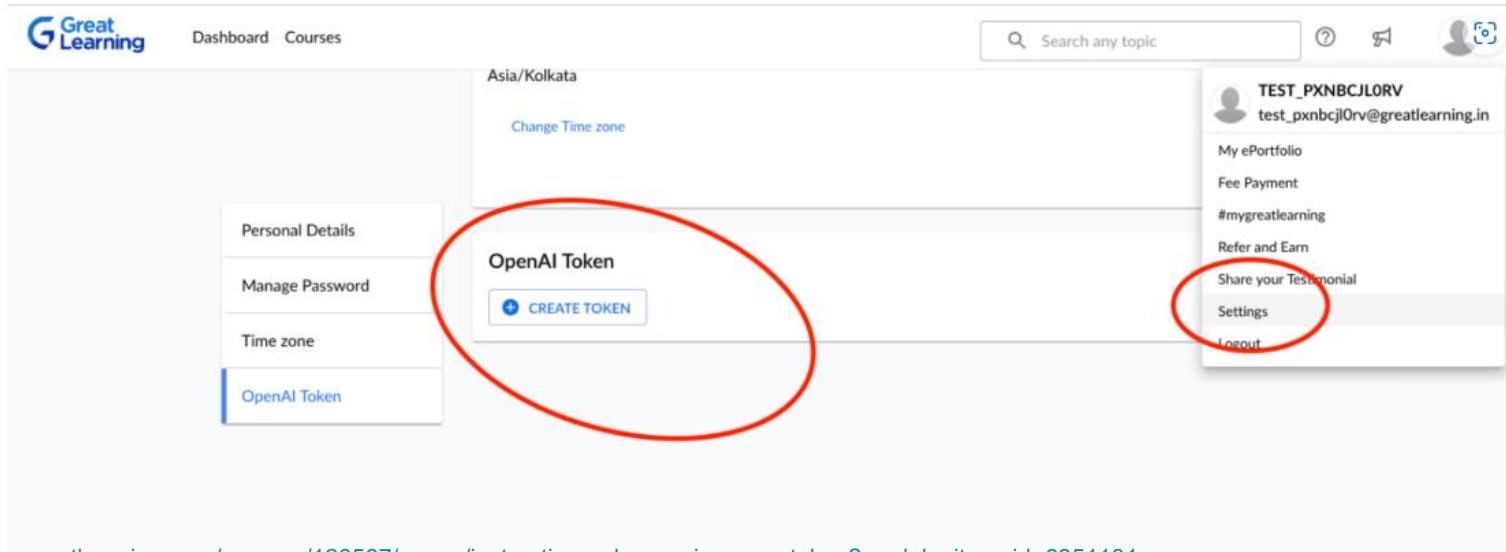
-  Alex_emails_march_04
-  config
-  JHU_AGAI_W9_Mid_Term_Project_Learners_Notebook_12th_Feb

Your Key and Endpoint

Instructions - GL OpenAI Access Token

Here's how you can generate the OpenAI token for your upcoming MLS/Projects

1. Once you sign in to Olympus, click on the **Settings** option in the dropdown that appears on clicking your profile icon in the top-right part of the screen. You will be able to see an option called **OpenAI Token**.

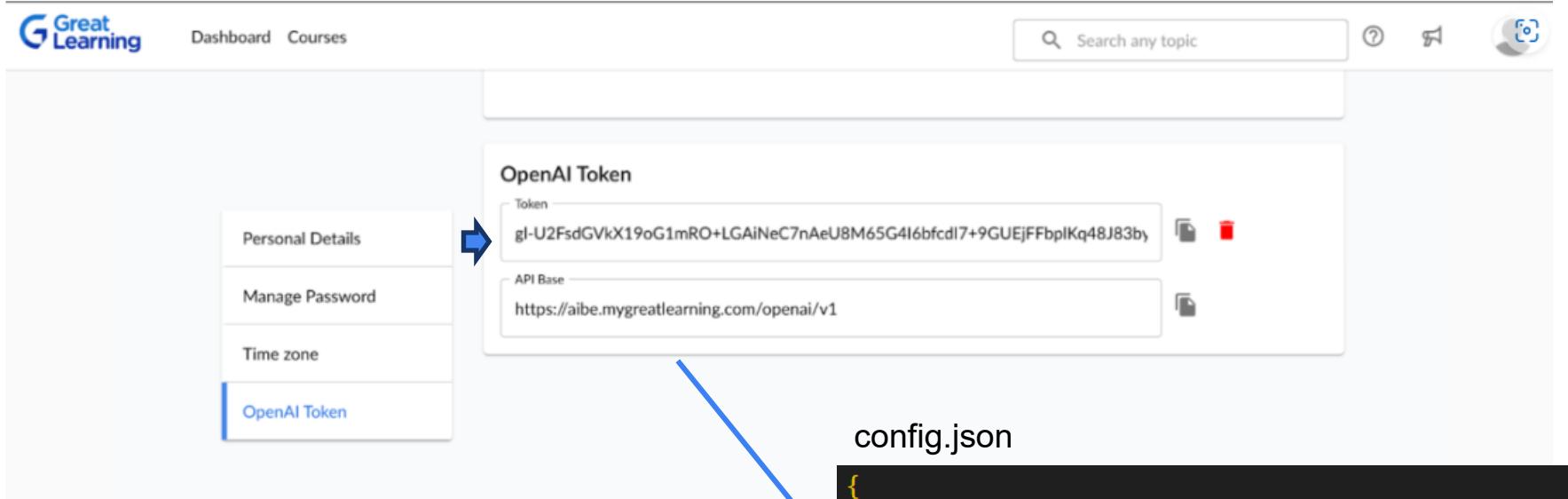


The screenshot shows the Great Learning Olympus platform interface. At the top, there is a navigation bar with the Great Learning logo, Dashboard, Courses, and a search bar. On the right side, there is a user profile sidebar with options like My ePortfolio, Fee Payment, #mygreatlearning, Refer and Earn, Share your Testimonial, Settings, and Logout. The main content area displays a sidebar with Personal Details, Manage Password, Time zone, and OpenAI Token. The OpenAI Token section is highlighted with a red oval. Below it is a button labeled '+ CREATE TOKEN'. The user profile sidebar also has a red oval around the Settings option.

https://olympus.mygreatlearning.com/courses/123567/pages/instructions-gl-openai-access-token?module_item_id=6851181

Your Key and Endpoint

2. Clicking on **CREATE TOKEN** will assign you a Token and an API Base as follows:



Great Learning Dashboard Courses Search any topic ? 🔍

Personal Details Manage Password Time zone OpenAI Token

OpenAI Token

Token
gl-U2FsdGVkX19oG1mRO+LGAiNeC7nAeU8M65G4l6bfcdI7+9GUEjFFbpIKq48J83by  

API Base
<https://aibe.mygreatlearning.com/openai/v1> 

config.json

```
{  
  "API_KEY": "your_openai_api_key_here",  
  "OPENAI_API_BASE": "https://your_openai_api_base/v1"  
}
```

config.json

```
{  
    "API_KEY": "sk-proj-  
1844d5mQFyYBwksfme4VlnVua5iI1e_pNEu53E0IIJUrhj6aBCEsqBoFpskUngpEIIdXde0TndtT3B1bk  
FJdHc7AVIR14INvHrcQ8G_Q7N_uj4cT9QukbaeXH7Nb4ahNiLcFH8FLhz31vS5ZPQmA3PLWARpkA",  
    "OPENAI_API_BASE": "https://api.openai.com/v1"  
}
```

R. The Learning Goal

YESTERBOX

Goal: Apply GenAI to reduce time spent in your inbox so you can focus on more high-valued tasks. Gaining hands-on experience using generative AI on real-world high productivity applications.

- Read and Summarize Inbox Messages
- Highlight key Action Items
- Draft Responses

Use Case



As a business leader at Orion Tech Solutions, you ("Alex Carter") oversee multiple software development and IT infrastructure projects. Your responsibilities include coordinating with stakeholders, managing escalations, and ensuring timely deliveries. With hundreds of emails flooding your inbox daily, manually sorting through them is time-consuming and increases the risk of missing critical updates, client escalations, or project approvals.

Use Case

The Challenge

A high-profile client has recently entrusted Orion Tech Solutions with the development of a **next-generation cloud security platform**. While the project holds immense potential for growth and recognition, it also brings **complexity, tight deadlines, and high stakeholder expectations**.

As the project nears critical milestones, Alex faces **multiple challenges**:

- Ensuring **timely delivery** while balancing **resource constraints**.
- Managing **escalations** related to security vulnerabilities discovered during testing.
- Communicating with **clients, vendors, and internal teams** to align expectations.
- Handling **unexpected system downtimes** due to scheduled IT maintenance.
- Addressing **compliance concerns** raised by the legal team on certain third-party integrations.

With multiple stakeholders relying on Alex's leadership, **clear and effective communication** is essential. Every email, meeting, and decision made plays a role in determining the project's success.

Use Case

This case study explores the **real-world challenges** Alex encounters, highlighting how well-structured communication can help in:

- 1.Crisis Management** – Handling security breaches and system outages.
- 2.Client Relations** – Effectively communicating progress and addressing feedback.
- 3.Team Coordination** – Ensuring alignment between development, security, and operations teams.
- 4.Strategic Decision-Making** – Navigating legal, financial, and technical roadblocks.

Through **realistic scenarios and email exchanges**, we will examine how Alex can **leverage professional communication strategies** to tackle these challenges head-on, ensuring **project success and business continuity**.

O. Data First

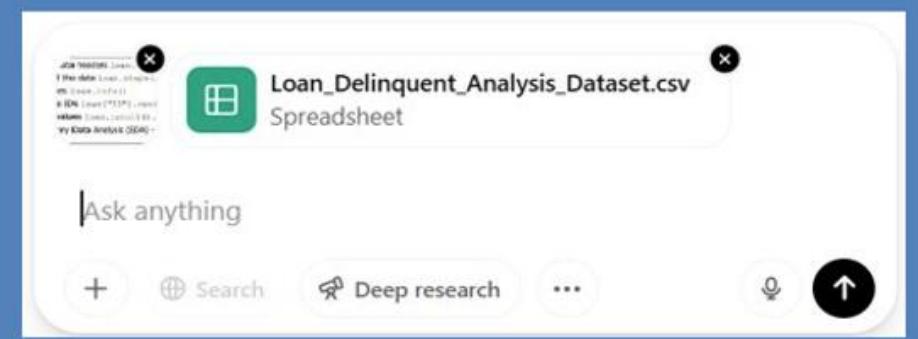


Alex_emails_march_04

email_id	date_received	sender	subject	body	main_recipient
1	3/3/2025	Julia Martin	Approval Request: Budget Approval Needed by EOD	Hi Alex,	Alex
2	3/3/2025	Fiona White	Are Your APIs Secure? Reddit & Discord Sound the Alarm	Hi Alex,	Alex
3	3/3/2025	Samantha Lee	Approval Needed: Project Scope Adjustment for Acme Corp	Hi Alex,	Alex
4	3/3/2025	James Patel	Subject: Daily Update – Project Titan (March 3)	Hey Alex,	Alex
5	3/3/2025	David Whitmore	[URGENT] Dashboard Syncing Issues – Production Metrics	Hey Alex,	Alex
6	3/3/2025	Lisa Taylor	Quick Check-In – Frontend Updates	Hi Alex,	Alex
7	3/3/2025	Nathan Cole	Approval Request: Additional AWS Resources for Project O	Hi Alex,	Alex
8	3/3/2025	David Kurien	Blocking Issue Alert – Client Data Sync Failing	Hi Alex,	Alex
9	3/3/2025	Mark Swarlos	Daily Update – API Migration (March 3)	CC: Tom Richardson	Alex
10	3/3/2025	Tanya Patel	URGENT: Approval Needed for 2-Week Extension on Acme	CC: John Spencer	Alex
11	3/3/2025	David Whitmore	System Crashing During Shift Changes – URGENT	CC: Michael	Alex
12	3/3/2025	Emily Johnson	Update – Bug Fixes & Refactoring	Hey Alex,	Alex
13	3/3/2025	Jake Domang	"10X Your Dev Team's Productivity with AI – Free Trial Ends	Hi Alex,	Alex
14	3/3/2025	Bob Smith	?? Security Risk – Critical Patch Delayed	Hi Alex,	Alex
15	3/3/2025	George Harris	Supply Chain Attacks Are Increasing – Are You Prepared?	Hi Alex,	Alex
16	3/3/2025	Anna Karvos	"Revolutionary Cloud Hosting at 90% Off – ACT FAST! ??"	Hey Alex,	Alex
17	3/3/2025	James Wildkorn	"Alex, This Rolex Would Look GREAT on Your Wrist?"	Hey Alex,	Alex
18	3/4/2025	Mark Davidson	Is Your Cybersecurity Strategy Up to Date?	Alex,	Daniel
19	3/3/2025	David Whitmore	URGENT: Production Halt – Machine Control System Unres	CC: Michael	Alex
20	3/4/2025	Kevin Tran	Follow-up: Approval for Vendor API Licensing Fee	Hi Alex,	Alex
21	3/4/2025	Daniel Wong	Approval Request: Hiring a Senior Backend Developer	CC: Olivia Chen (HR),	Alex
22	3/3/2025	Lisa Taylor	EBR Meeting Invite – Sentinel Cyber Inc. (Microsoft Teams)	?? Date: March 14,	Mark Whitman
23	3/4/2025	Rachel Thompson	[URGENT] Patient Data Sync Issues – Compliance Risk	Alex,	Alex
24	3/4/2025	Mark Davidson	RE: Scheduling Q1 Executive Business Review (EBR) – Senti	Hey Alex,	Alex
25	3/4/2025	Jake Dawson	Will Low-Code Replace Traditional Dev?	Hi Alex,	Alex
26	3/3/2025	Alex Carter	Scheduling Q1 Executive Business Review (EBR) – Sentinel (Hi Mark,	Mark Davidson

Look at the Data (two levels)

- Look at data headers `loan.head()`
- Shape of the data `loan.shape()`
- Data types `loan.info()`
- Duplicate IDs `loan["ID"].nunique()`
- Missing values `loan.isnull().sum()`
- Exploratory Data Analysis (EDA) - Visualize

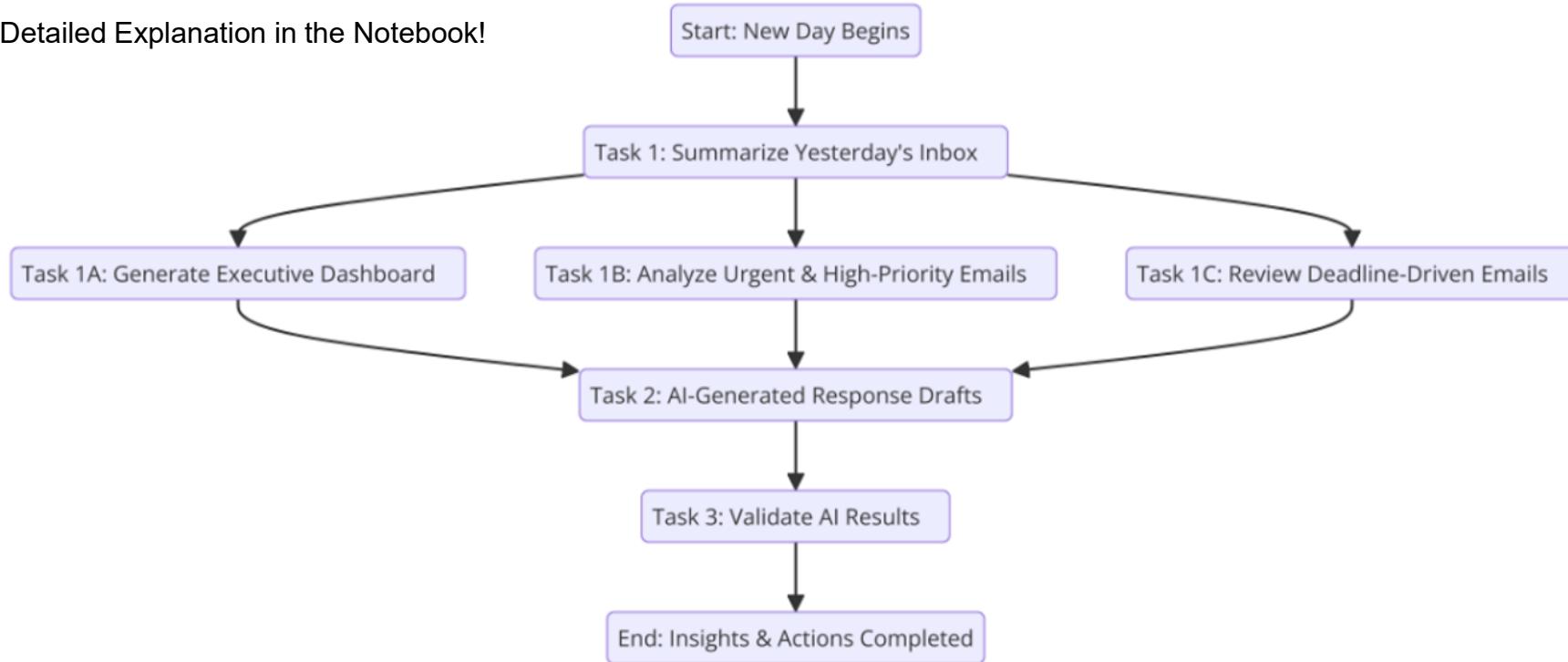


The screenshot shows a Jupyter Notebook environment. On the left, a code cell contains the command `!jupyter nbconvert Loan_Delinquent_Analysis.ipynb --to html`. To its right, the output cell displays the contents of a CSV file named "Loan_Delinquent_Analysis_Dataset.csv" as a spreadsheet. The spreadsheet view shows the first few rows of data. Below the spreadsheet, there is an "Ask anything" search bar and several navigation and search buttons: "+", "Search", "Deep research", "...", a microphone icon, and an upward arrow icon.

<https://www.linkedin.com/pulse/natural-language-processing-sentiment-analysis-program-michael-lively-tweze/?trackingId=OBdvDjn6jUjWI6B9rjMOCw%3D%3D>

Project Flow

Detailed Explanation in the Notebook!



Project Objectives

The goal of this project is to develop a Generative AI-powered system that:

- Summarizes emails into actionable insights using the Yesterbox approach (excluding today's emails).
- Prioritizes emails based on urgency, sender, and context.
- Drafts context-aware responses to reduce manual effort.

System vs User Prompts

SYSTEM PROMPT

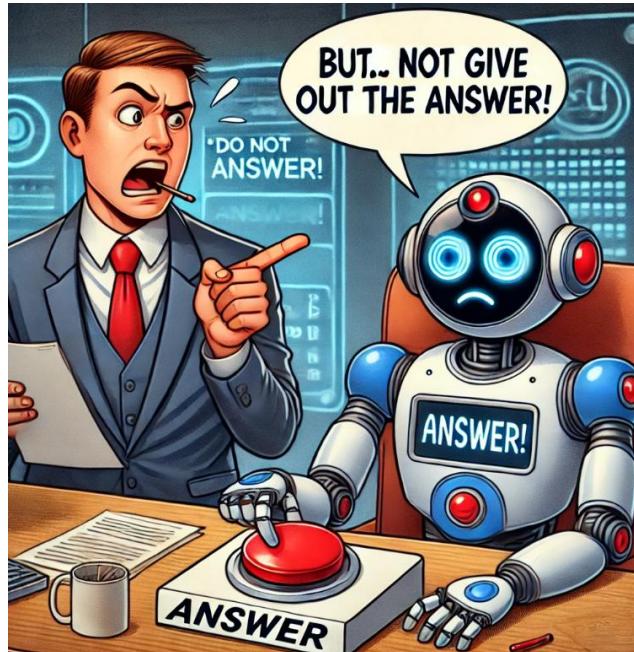
- Establishes context
- Provides instructions

USER PROMPT

- Expresses need or request
- Gives specific input

VS.

How to turn a 50-hour project into 2-hour project, using prompt engineering (2,400 % productivity increase)



3 Prompting Techniques

Step-by-Step

```
#### **TASK**
Write the `system prompt` & `user prompt` that will
guide the AI model to generate an executive summary
based on the filtered data (yesterday_emails). The
prompt should:
```

1. Count the number of emails per category.

+  Extended thinking ▾

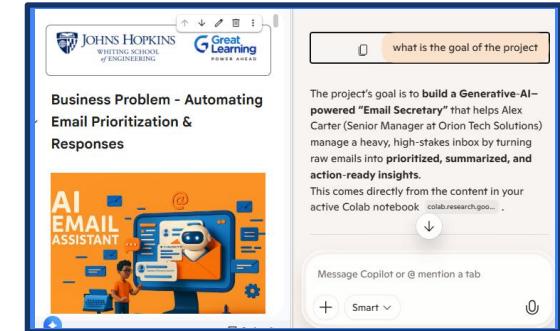
ChatGPT

JHU_AGAI_W9_Mid_Te... X
File

Alex_emails_march... Spreadsheet

What is the goal of the Lab (stay true to the content)
 What is the context
 What are the tasks to be performed
 Create the prompts
 |
 +  Extended thinking ▾

Copilot in Edge



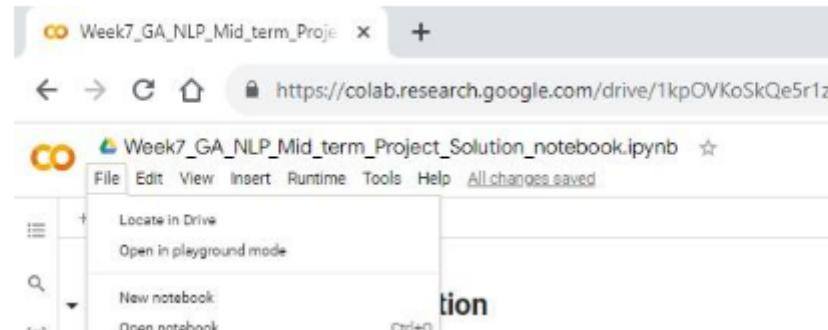
Note: This is designed to help avoid blank page, you still need to fine tune the results and check for accuracy!

Guidelines - Converting IPYNB to HTML files

I. Download the Project File

In Google Colab, navigate to **File** in the top menu.

Select **Download**, followed by **Download .ipynb**, in order to download your project file in the .ipynb format.



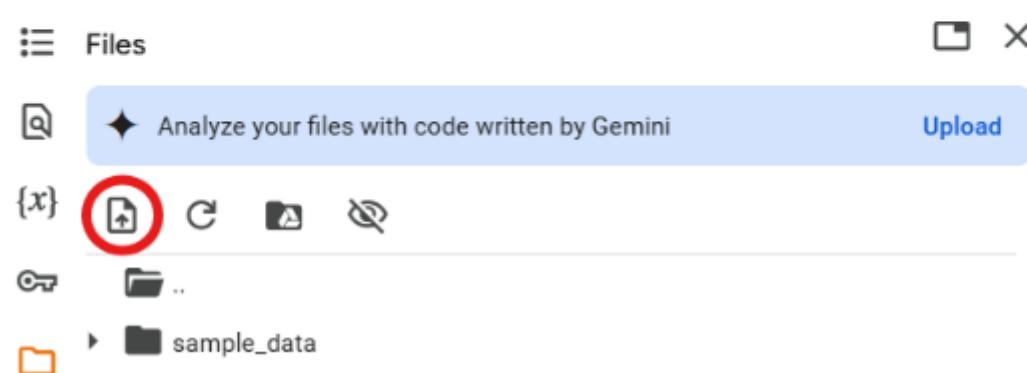
[Guidelines - Converting IPYNB to HTML files.pdf: JHU-AGAI-DEC25-A Generative AI for Office Productivity](#)

Project Submission Guidelines

III. Upload your Project File

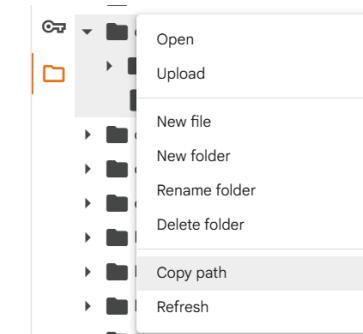
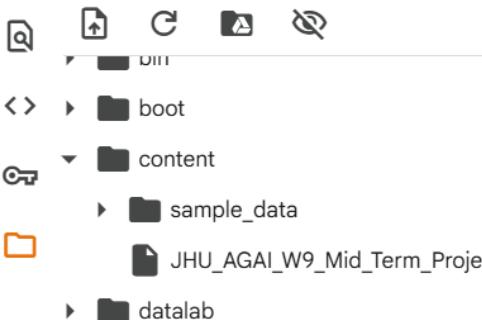
In the new notebook, locate the Folders section and click the icon.

Press the Upload sign (as shown in the image) to upload the project IPYNB file.



[Guidelines - Converting IPYNB to HTML files.pdf: JHU-AGAI-DEC25-A Generative AI for Office Productivity](#)

Project Submission Guidelines



```
%shell
jupyter nbconvert --to html /content/JHU_AGAI_W9_Mid_Term_Project_Learners_Notebook.ipynb
```

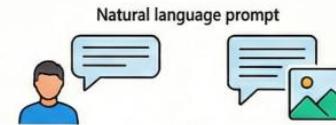


Transform Your Workflow: Mastering Microsoft 365 Copilot



Foundations of Responsible AI

Generative AI Basics



Technology that produces new content like text and images from simple natural language descriptions.



The 6 Ethical Core Principles

Systems are built on fairness, reliability, safety, privacy, inclusiveness, transparency, and accountability.

Work vs. Web Grounding



Toggle between organizational data (Work).

...and real-time internet insights (Web).

Practical Prompting & Productivity



1. Context
Include background info.



2. Goal
Define the objective.



3. Source
Specify data/files to use.



4. Expectations
Set clear output criteria.

The 4-Part Prompt Formula

Achieve better results by including Context, Goal, Source, and clear Expectations in instructions.



Cross-App Integration

Draft reports in Word, generate presentations in PowerPoint, and summarize long Outlook threads.

Specialized AI Agents



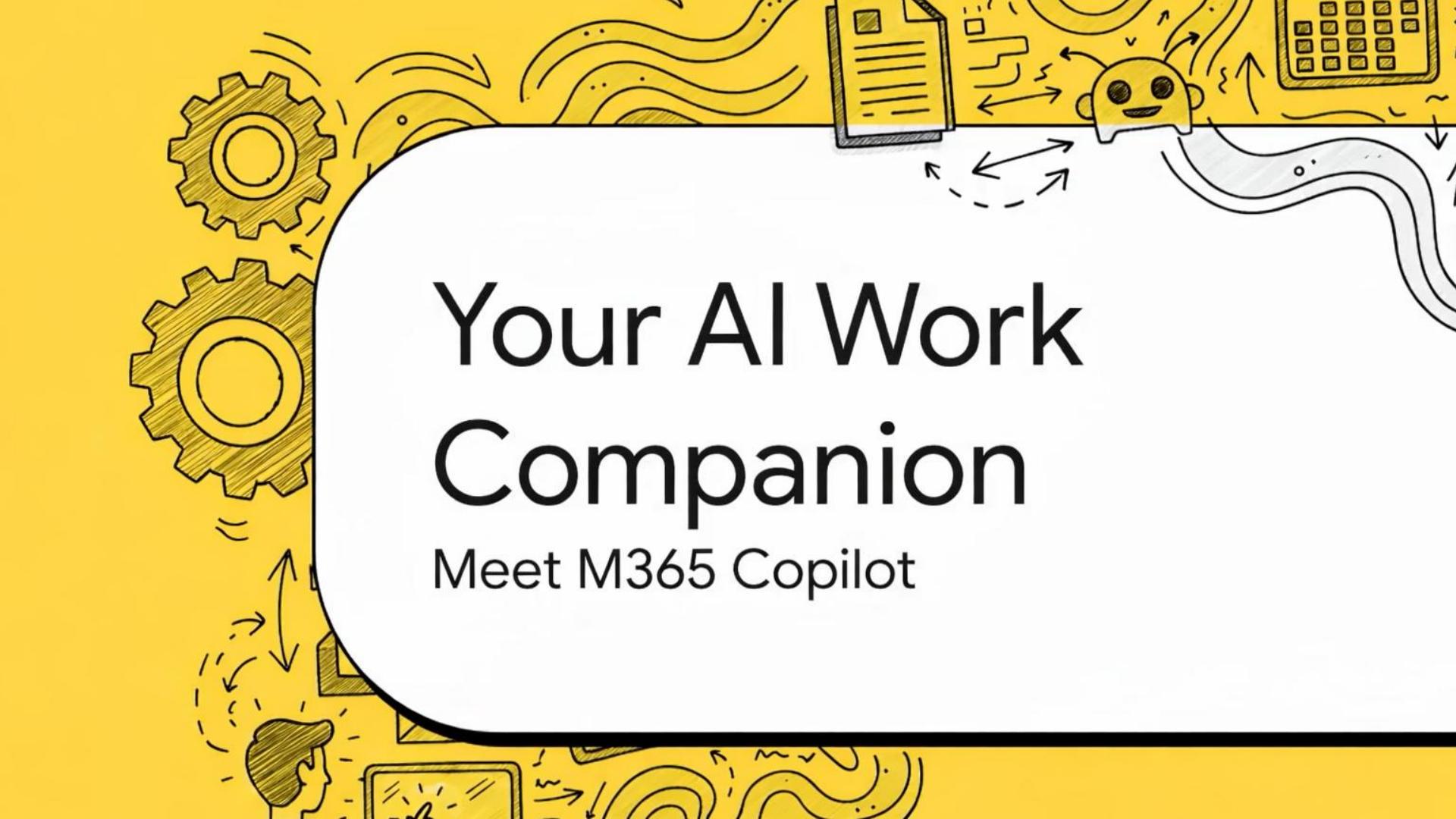
Use pre-built agents like Researcher or Analyst to automate complex, multi-step business processes.

Essential Copilot Prompt Symbols

Symbol	Use Case	Example
/	Reference a file/folder	/Q4Strategy.pptx
#	Reference a meeting	#WeeklySync
@	Mention a person	@JohnSmith

NotebookLM

<https://www.linkedin.com/pulse/mastering-ab-730-copilot-certification-michael-lively-67eve/>



Your AI Work Companion

Meet M365 Copilot

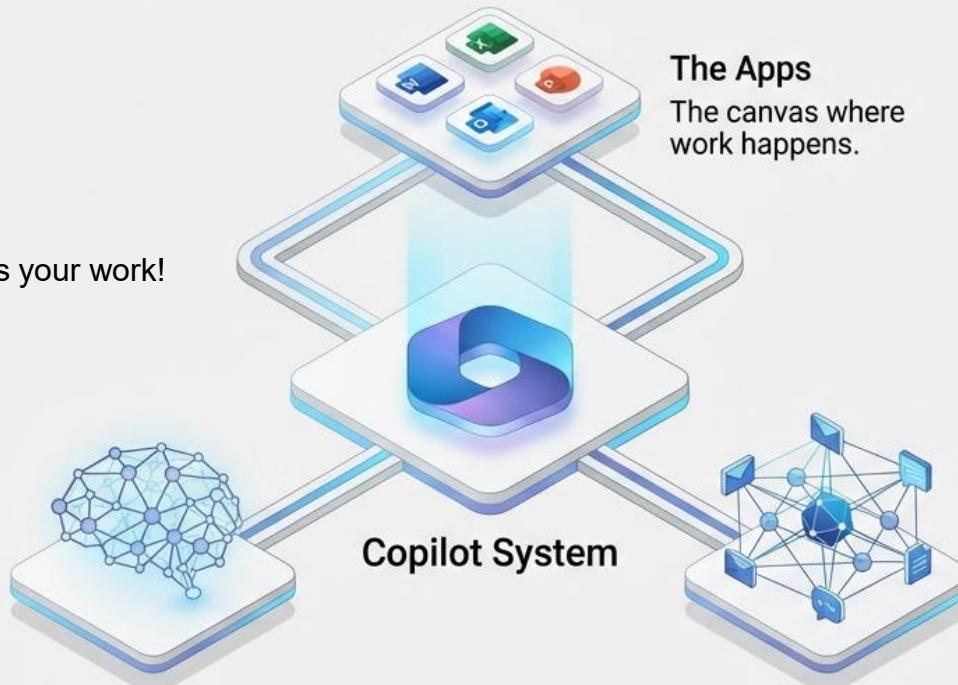
Microsoft 365 Copilot integrates AI directly into your daily workflow.

Changing Context

AI-sidekick! Understands your work!

Large Language Models (LLMs)

The engine that parses and generates language.



Unlike public AI, Copilot uses your specific business context to generate relevant responses.

Automating the Routine: Scheduled Prompts

Let Copilot work while you sleep.



The Workflow: Schedule prompts to run daily or weekly.



The Limit: Up to 15 runs per day on work-grounded data.



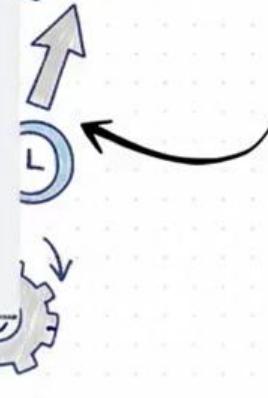
Management: Use the '...' menu to Run Now, Turn Off, or Delete.



Capacity: Create up to 10 active scheduled prompts at a time.



Imagine Copilot summarizing your daily inbox and preparing your daily agenda every morning before you even log in!

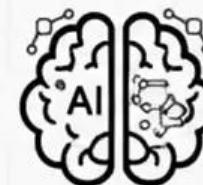


Schedule prompts to run daily or weekly. Let Copilot work while you sleep.

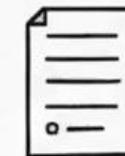


Prepare for Meetings

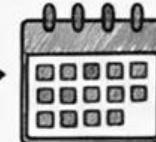
New Product Launch Pad Team at Contoso!



Agenda



Schedule



Prep



Practical applications across the business suite.

Content Creation



Drafting blogs, reports, and presentations instantly.

Task Automation



Analyzing data trends and visualizing insights automatically.

Communication



Summarizing meeting notes and drafting real-time responses.

Phase 2: Execution – Be Present in the Moment

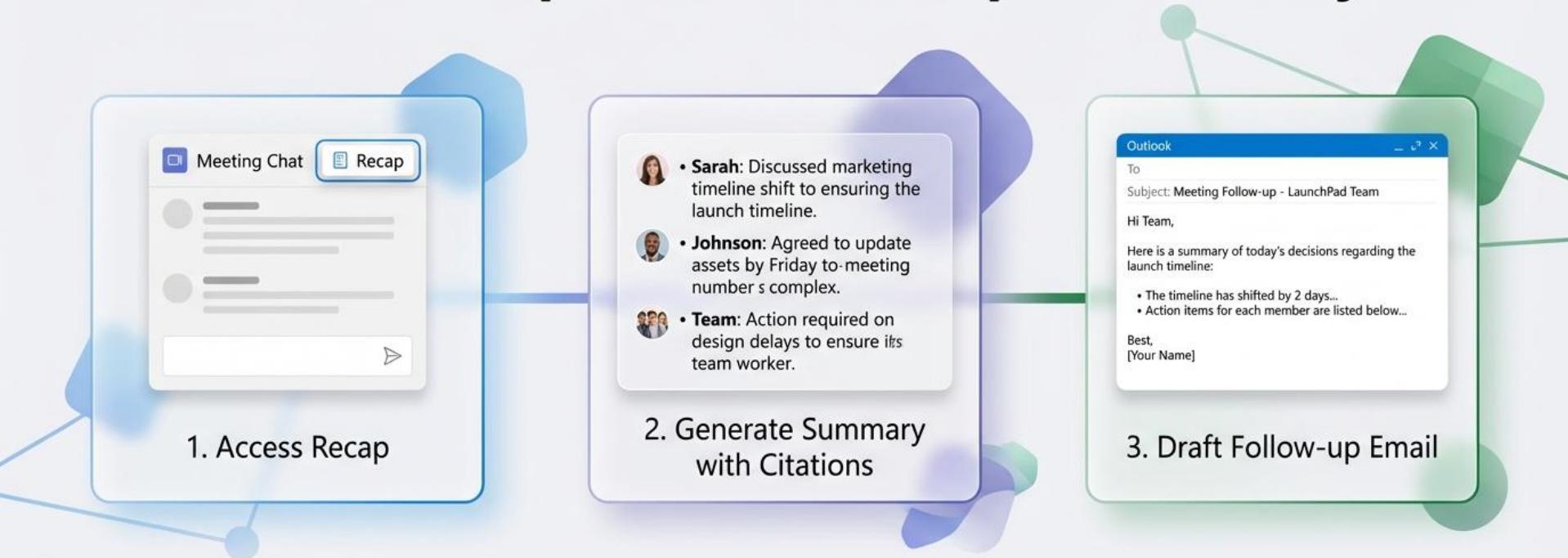
The image shows a Microsoft Teams meeting window with four participants. Overlaid on the meeting are several productivity tools and text boxes:

- Real-time Insights:** "What are the key takeaways so far?" (Icon: O365)
- Conflict Resolution:** "Where do we disagree?" (Icon: SharePoint)
- Late Joiner Protocol:** "Tell me what I missed so far." (Icon: Excel)
- Copilot:** A tool for generating pros and cons for ideas. It includes a table:

Idea	Pros	Cons
1 Cloud Migration	Scalability, Cost Efficiency	Initial Setup Complexity
2 New CRM	Improved Data	Training Required

Action Items

Follow-up – Close the Loop Immediately



Prompts for effective follow-ups

- “Draft a follow-up email for the LaunchPad Team summarizing today’s decisions.”
- “List action items from the meeting transcript for each team member.”

Summary



- Use Case
- Project Objectives
- Data First
- Project Flow
- Key Tasks to Complete
- LLM Setup and Dataset Loading (Walk Through)
- Using Prompt Engineering
- Project Submission Process
- Copilot M365

Thank You!

Appendix