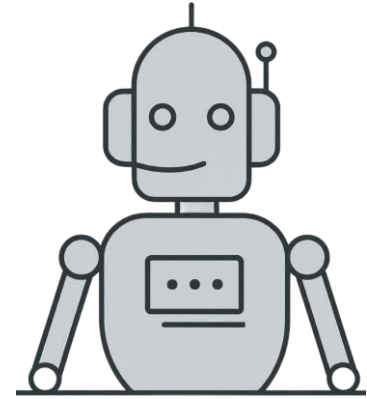


# Generative AI for Office Productivity



Mid-Term Project  
Mike Lively



## Mike Lively

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



## 16 Azure Cloud Certs



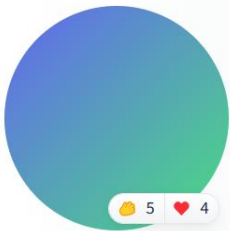
## About Me

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/AT\_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

1 day ago

Running

**AI Use Case Millionaire** 

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

eaglelandsonce

2 days ago

Running

private

**Presentation Tool** 

Presentation Tool

eaglelandsonce

5 days ago

Running

private

**Presentation Version3** 

eaglelandsonce

7 days ago

Running

**Snakegameforfun** 

Play the classic Snake game on your device

eaglelandsonce

9 days ago

Runtime error

**Snake** 

eaglelandsonce

9 days ago

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.
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



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

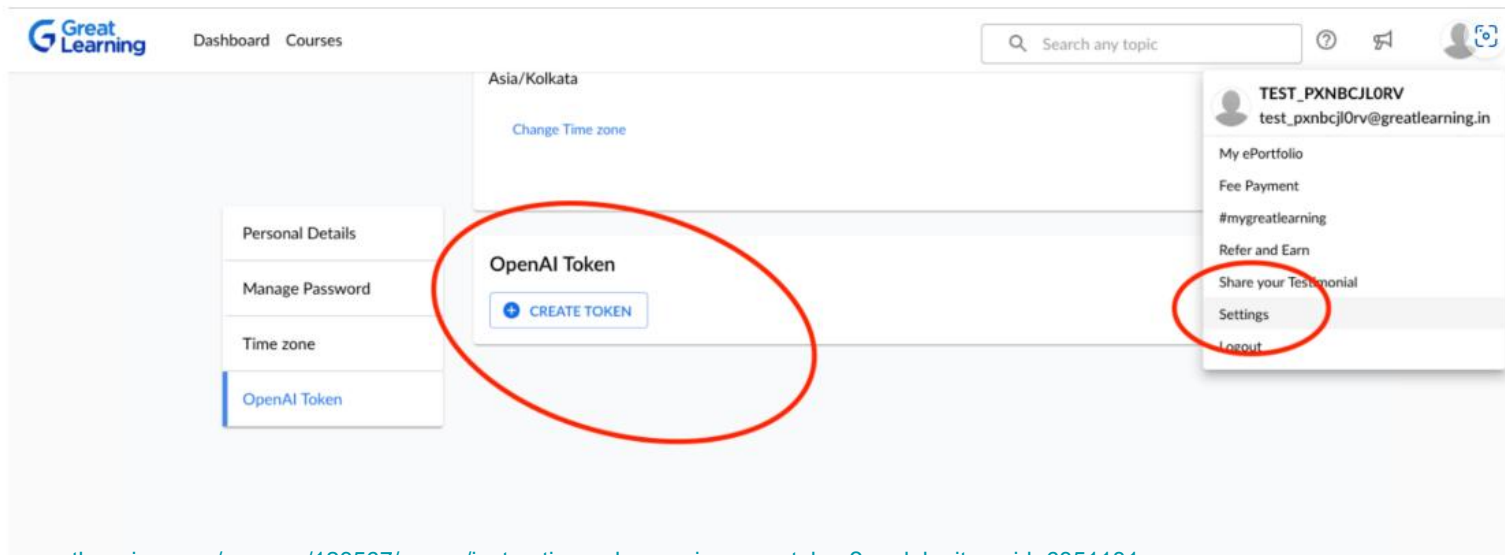
 JHU\_AGAI\_W9\_Mid\_Term\_Project\_Learners\_Notebook\_12th\_Feb

# Your Key and Endpoint

## Instructions - GL OpenAI Access Token

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

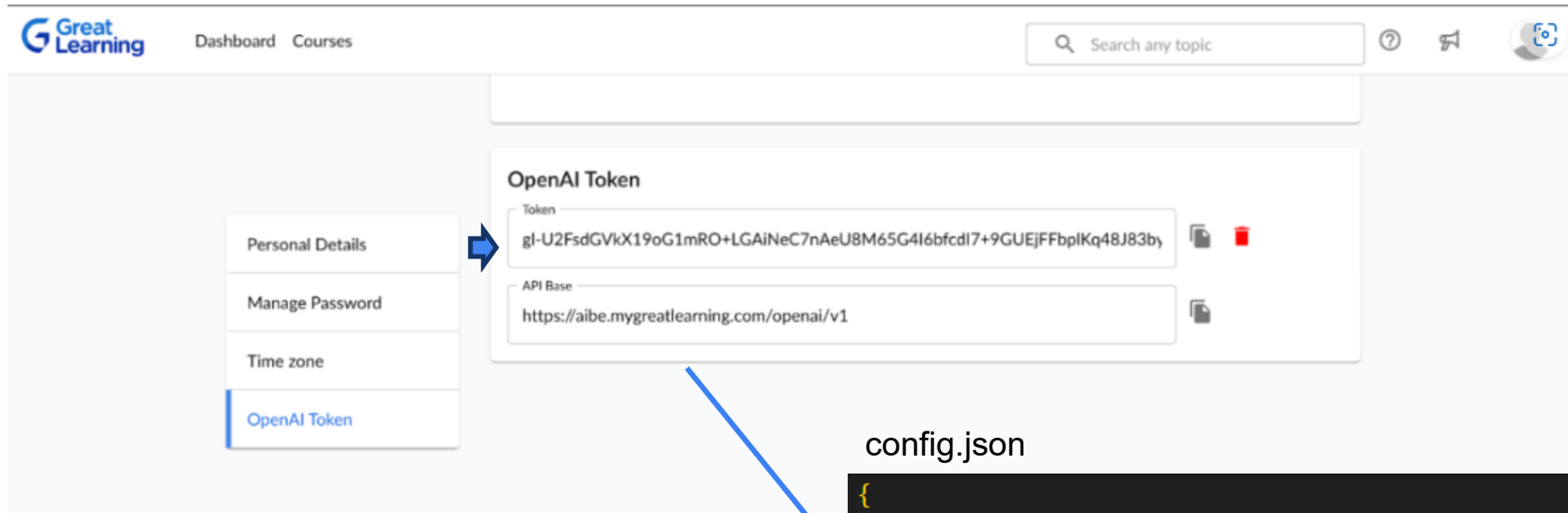
1. Once you sign in to Olympus, click on the **Settings** option in the dropdown that appears on clicking your profile icon in the top-right part of the screen. You will be able to see an option called **OpenAI Token**.



[https://olympus.mygreatlearning.com/courses/123567/pages/instructions-gl-openai-access-token?module\\_item\\_id=6851181](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:



The screenshot shows the Great Learning dashboard with a sidebar menu on the left containing 'Personal Details', 'Manage Password', 'Time zone', and 'OpenAI Token'. The 'OpenAI Token' section is active, displaying a 'Token' field with the value 'gl-U2FsdGVkX19oG1mRO+LGAiNeC7nAeU8M65G4I6bfcdI7+9GUEjFFbpIKq48J83by' and an 'API Base' field with the value 'https://aibe.mygreatlearning.com/openai/v1'. A blue arrow points from the 'OpenAI Token' menu item to the token field, and another blue arrow points from the 'API Base' field to the JSON configuration block on the right.

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_pNEu53E0IIJUrhj6aBCEsqBoFpskUngpEIdXde0TndtT3B1bk  
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.

## 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.

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

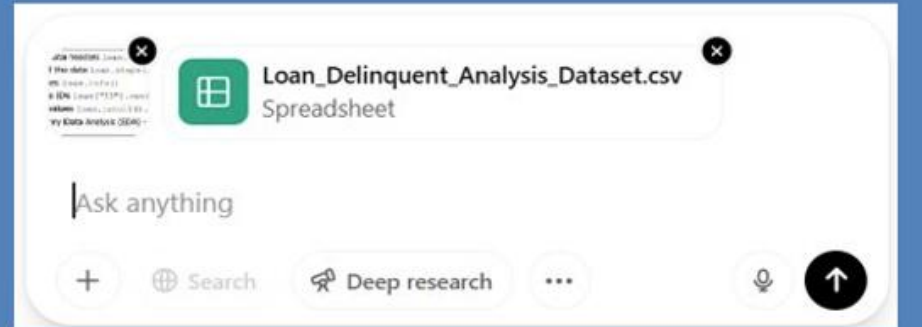


Alex\_emails\_march\_04

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 I	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 S	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 C	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



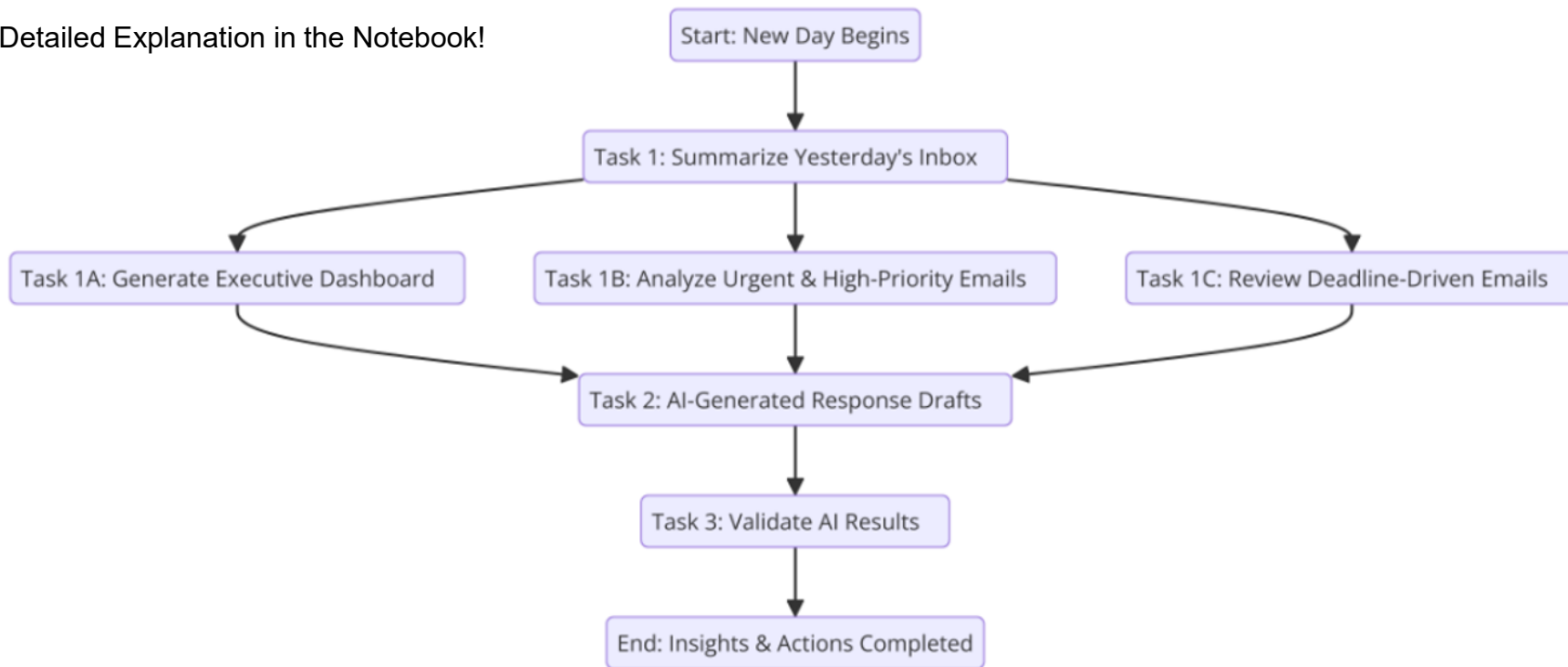
<https://www.linkedin.com/pulse/natural-language-processing-sentiment-analysis-program-michael-lively-tweze/?trackingId=OBdvDjn6jUjWI6B9rjMOCw%3D%3D>





# Project Flow

Detailed Explanation in the Notebook!

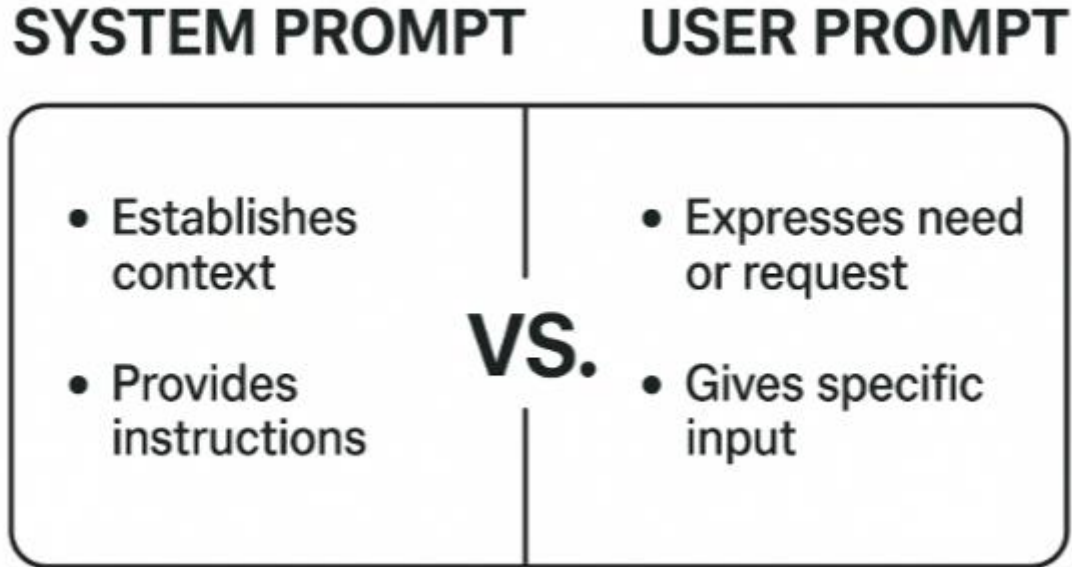


# Project Objectives

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



# 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...  
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

**Business Problem - Automating Email Prioritization & Responses**

what is the goal of the project

The project's goal is to build a **Generative-AI-powered "Email Secretary"** that helps Alex Carter (Senior Manager at Orion Tech Solutions) manage a heavy, high-stakes inbox by turning raw emails into **prioritized, summarized, and action-ready insights**. This comes directly from the content in your active Colab notebook `colab/research/goo...`

Message Copilot or @ mention a tab

+ Smart ▾

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

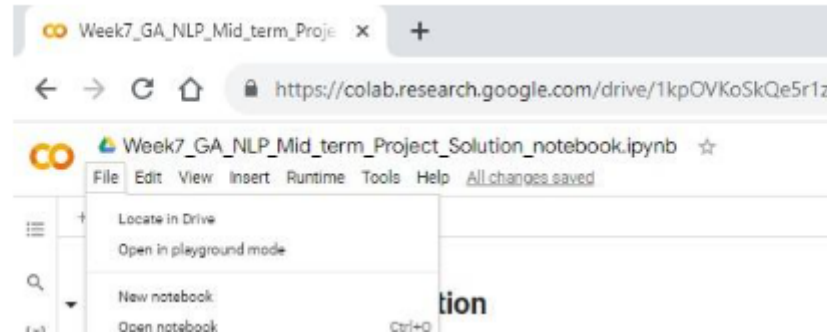


## Guidelines - Converting IPYNB to HTML files

### 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.

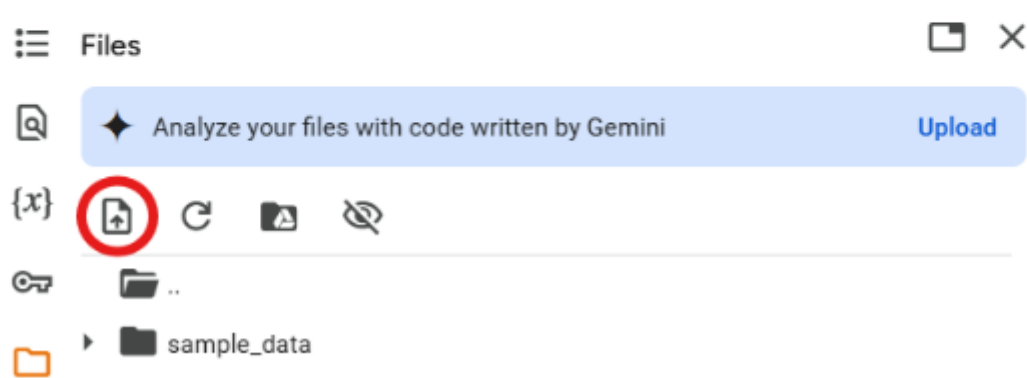


[Guidelines - Converting IPYNB to HTML files.pdf: JHU-AGAI-DEC25-A Generative AI for Office Productivity](#)

### III. Upload your Project File

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

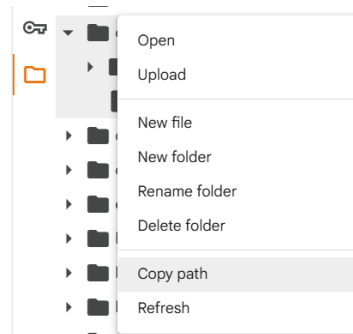
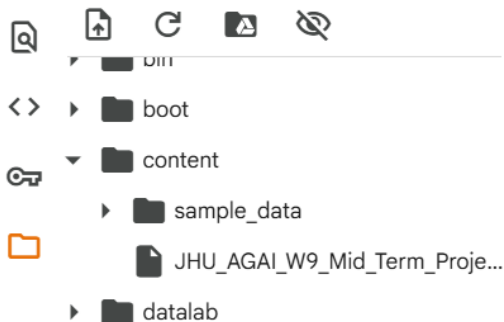
Press the Upload sign (as shown in the image) to upload the project IPYNB file.



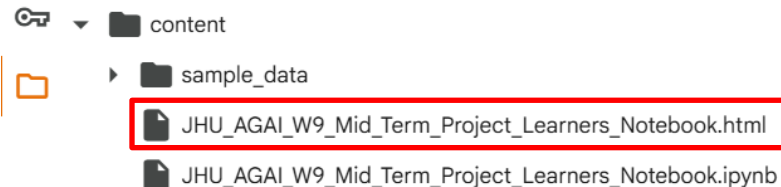
[Guidelines - Converting IPYNB to HTML files.pdf: JHU-AGAI-DEC25-A Generative AI for Office Productivity](#)



# Project Submission Guidelines



```
%%shell  
jupyter nbconvert --to html /content/JHU_AGA1_W9_Mid_Term_Project_Learners_Notebook.ipynb
```

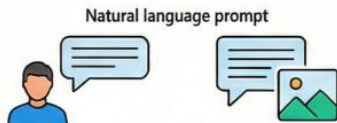


## Transform Your Workflow: Mastering Microsoft 365 Copilot



### Foundations of Responsible AI

#### Generative AI Basics



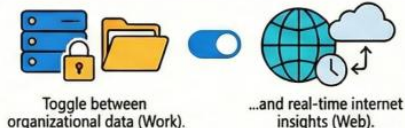
Technology that produces new content like text and images from simple natural language descriptions.



#### The 6 Ethical Core Principles

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

#### Work vs. Web Grounding



### Practical Prompting & Productivity



#### 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/>

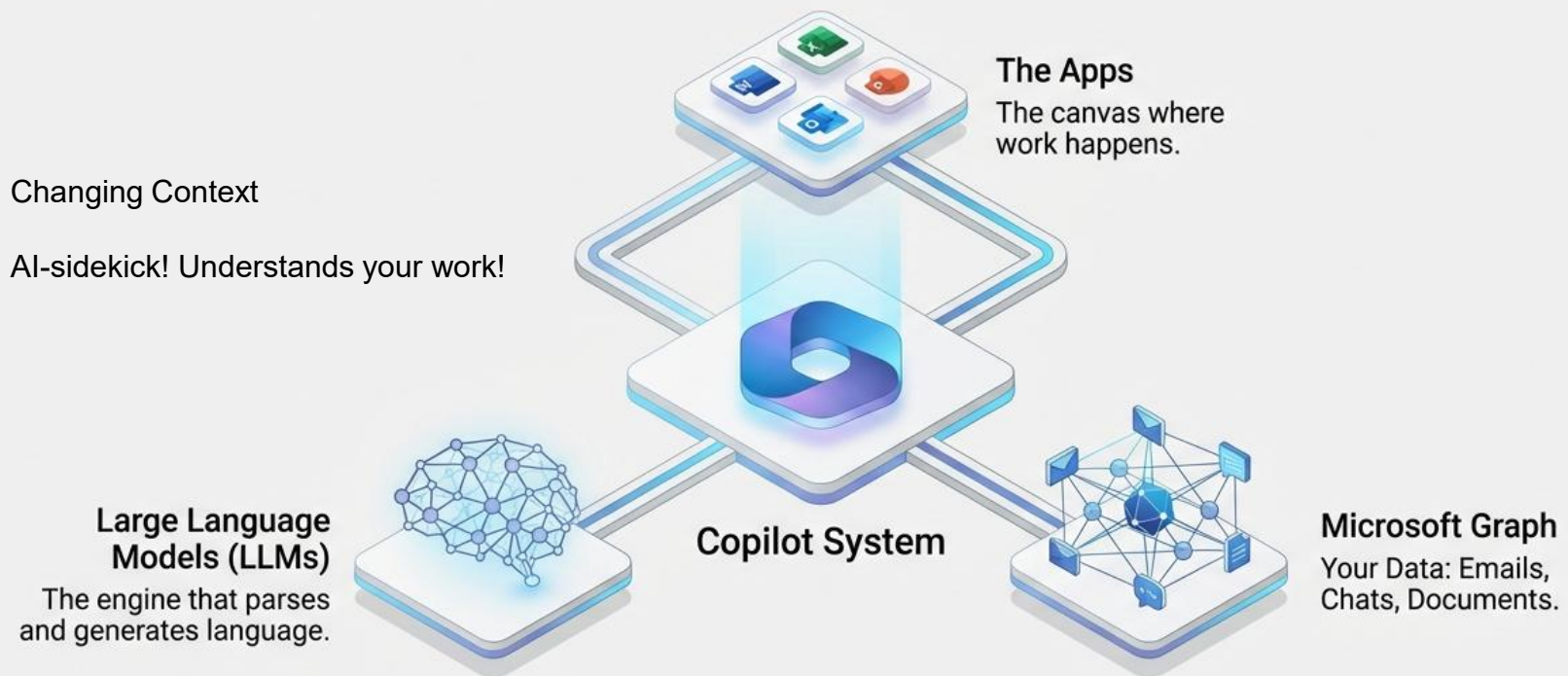


# Your AI Work Companion

Meet M365 Copilot



# Microsoft 365 Copilot integrates AI directly into your daily workflow.



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.

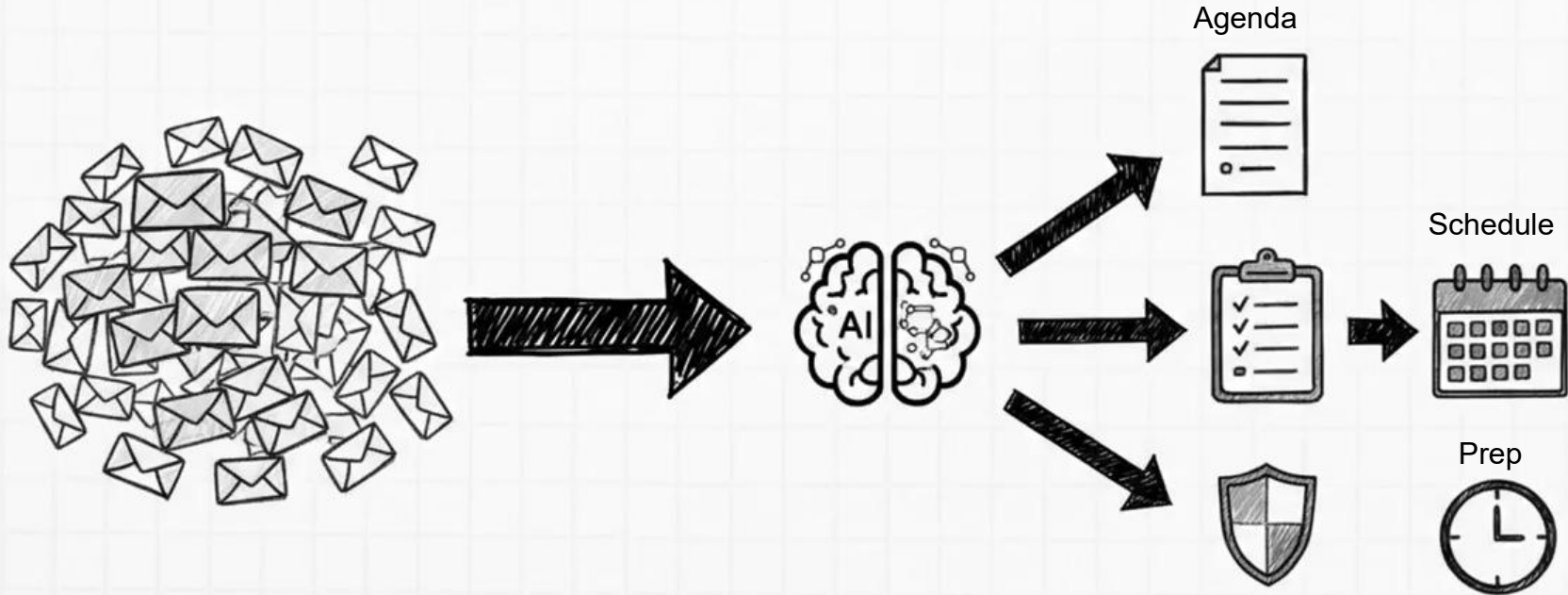


Imagine Copilot summarizing your daily inbox and preparing your daily agenda every morning before you even log in!



# Prepare for Meetings

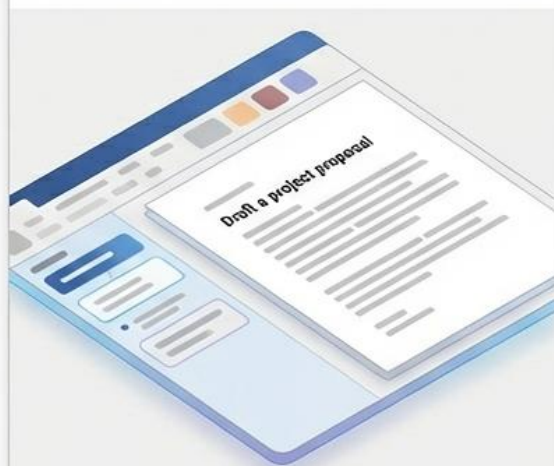
New Product Launch Pad Team at Contoso!





# 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



Real-time Insights:  
"What are the key takeaways so far?"



Conflict Resolution:  
"Where do we disagree?"

The screenshot shows a Microsoft Teams meeting window. The main area displays four video feeds of participants: Scott Soderstrom, Kristen Richardson, Chasen Dantes, and Solomon Bruster. A fifth participant is visible in a smaller feed at the bottom right. The top of the window has a search bar and icons for Amend, Deactivating, Chat, Screen, Share, More, Meet, Use, and Save. On the right side, the Copilot sidebar is open, showing a prompt to 'Create a table of pros and cons for each idea.' Below this, it displays a table with two columns: 'Idea' and 'Pros' and 'Cons'. The table contains two rows of data. At the bottom of the sidebar, there is a text input field labeled 'Type a prompt...' and a send button.

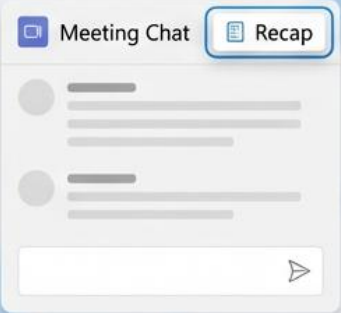
Idea	Pros	Cons
1 Cloud Migration	Scalability, Cost Efficiency	Initial Setup Complexity
2 New CRM	Improved Data	Training Required



Late Joiner Protocol:  
"Tell me what I missed so far."

Action Items

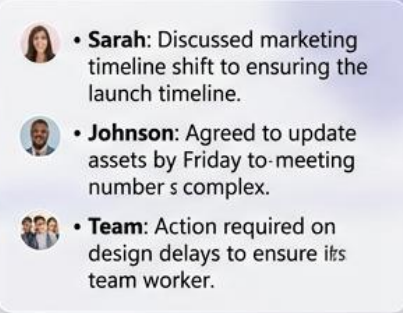
# Follow-up – Close the Loop Immediately



Meeting Chat

Recap

1. Access Recap




• **Sarah:** Discussed marketing timeline shift to ensuring the launch timeline.

• **Johnson:** Agreed to update assets by Friday to meeting number 5 complex.

• **Team:** Action required on design delays to ensure it's team worker.

2. Generate Summary with Citations



Outlook

To

Subject: Meeting Follow-up - LaunchPad Team

Hi Team,

Here is a summary of today's decisions regarding the launch timeline:

- The timeline has shifted by 2 days...
- Action items for each member are listed below...

Best,  
[Your Name]

3. Draft Follow-up Email

## 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