

Unleashing AI: Transforming Higher Education's IE/IR Landscape

CAIR 2023

institutional Effectiveness

Su Seon Yang, Kevin Kaeochinda, Yusuke Kuroki,
Alan Yu, Tim Sechang, Sunny Moon



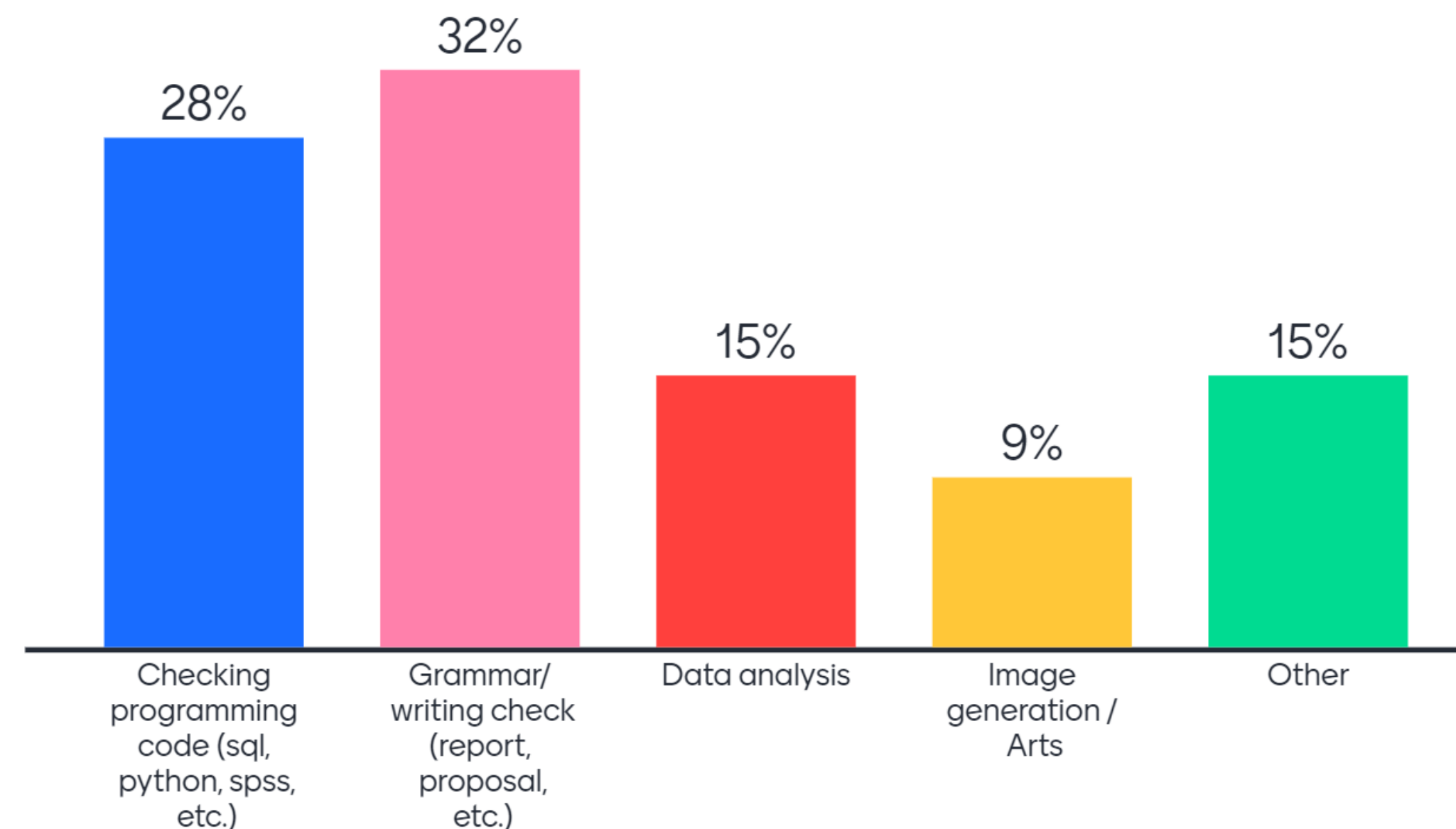
CAL STATE LA
CALIFORNIA STATE UNIVERSITY, LOS ANGELES

Use your phone browser: **MENTI.COM** with code **9981 879**

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 Mentimeter

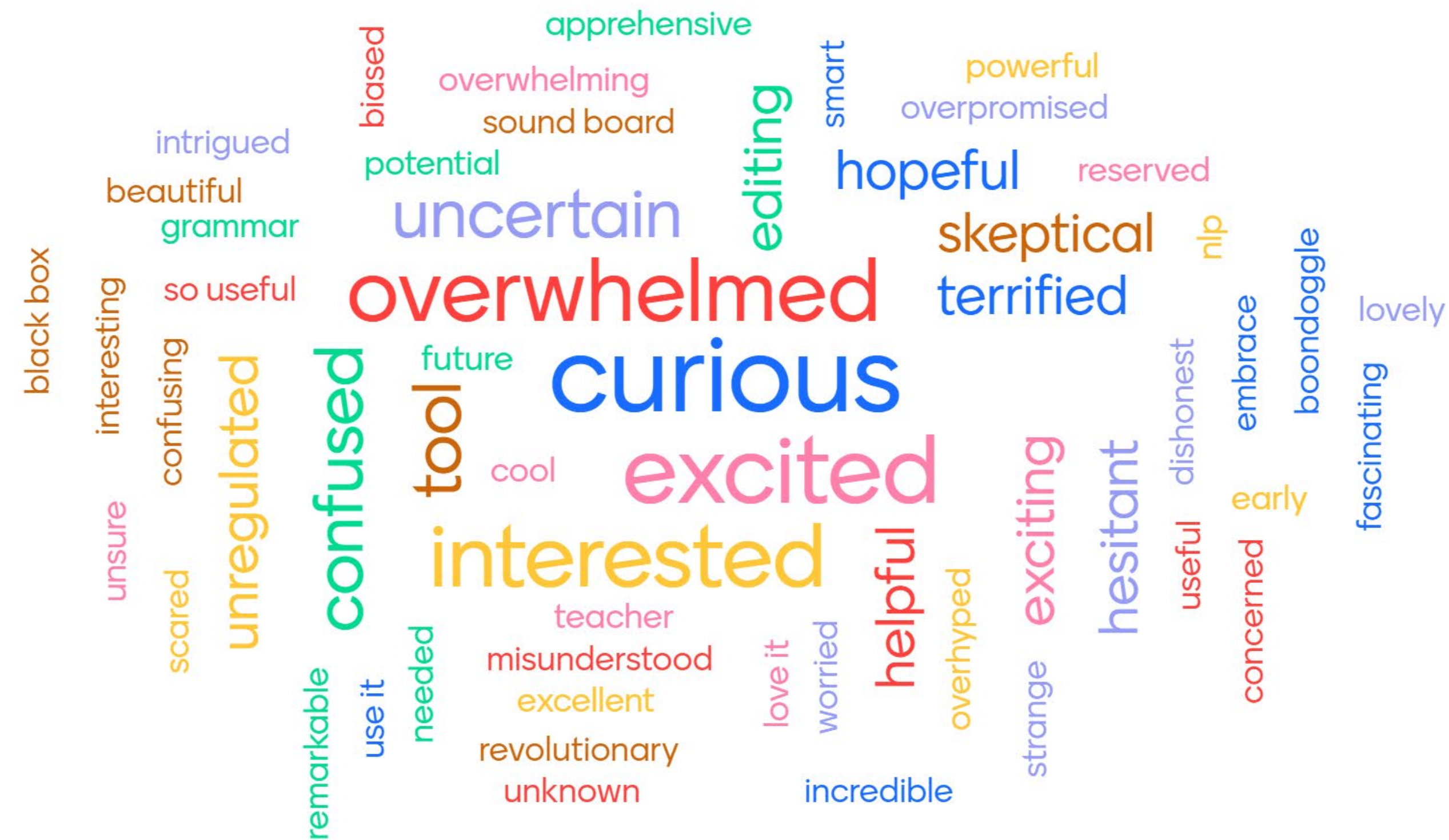
Have you utilized AI tool(s) for your office functions?





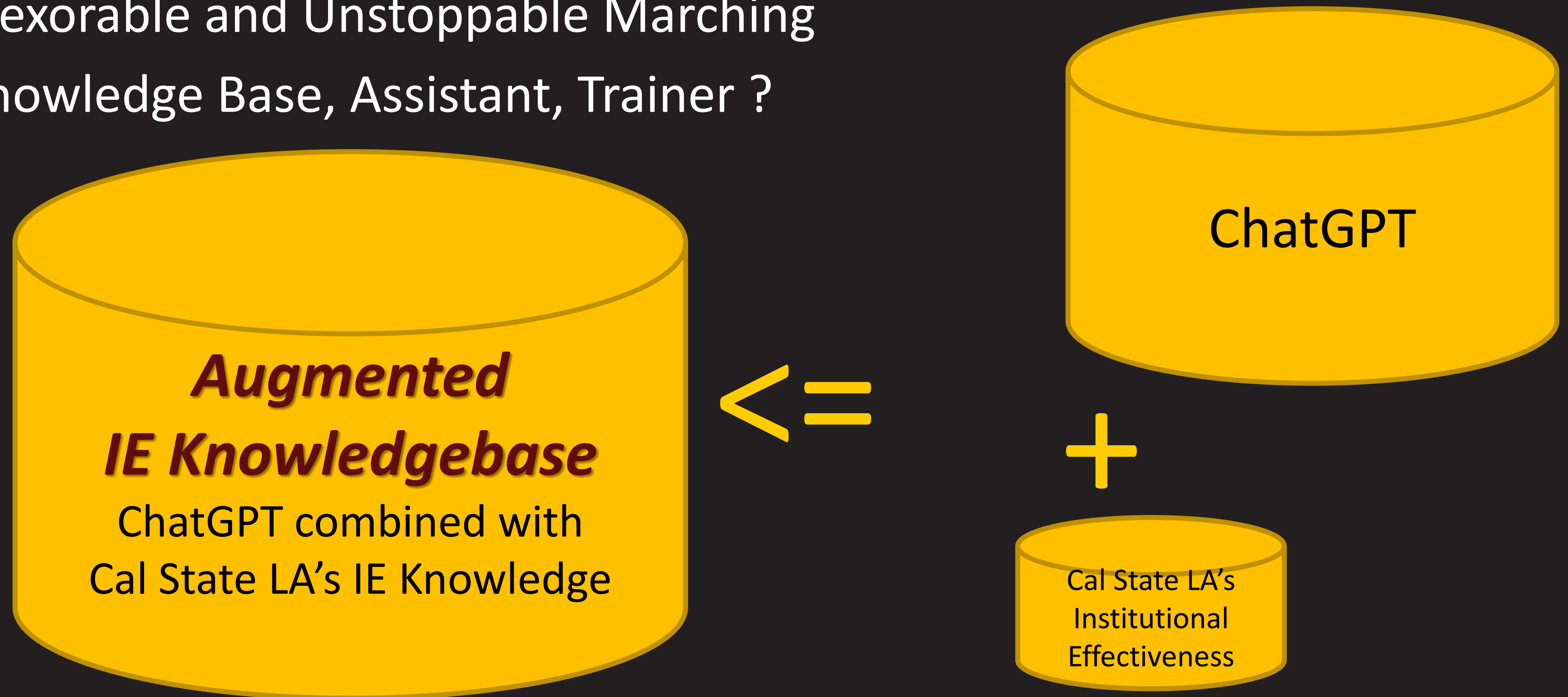
How do you feel about AI?

92 responses



Introduction


- New Wave of Generative AI Models: Challenge or Opportunity ?
- Digital/Information Literacy to AI Literacy
- Inexorable and Unstoppable Marching
- Knowledge Base, Assistant, Trainer ?




ChatGPT Plus (\$20 per month)


- **Faster Response Times:** ChatGPT Plus typically provides quicker responses.
- **Priority Access:** During times of high demand, Plus subscribers often have more reliable access to the service.
- **General Updates and Features:** Subscribers may receive early or exclusive access to new features and updates
 - Web browsing
 - Data analysis
 - DALL-E
 - Custom GPT


My GPTs


**Create a GPT** Beta
Customize a version of ChatGPT for a specific purpose


**Data Security Compliance Officer**
Tell me if I am in compliance with our school's data sharing policy 1


Made by OpenAI

**DALL-E**
Let me turn your imagination into imagery By ChatGPT

**Data Analysis**
Drop in any files and I can help analyze and visualize your data By ChatGPT

**ChatGPT Classic**
The latest version of GPT-4 with no additional capabilities By ChatGPT

**Game Time**
I can quickly explain board games or card games to players of any age. Let the games begin! By ChatGPT

**The Negotiator**
I'll help you advocate for yourself and get better outcomes. Become a great negotiator. By ChatGPT

Data Analysis with ChatGPT

YK

You

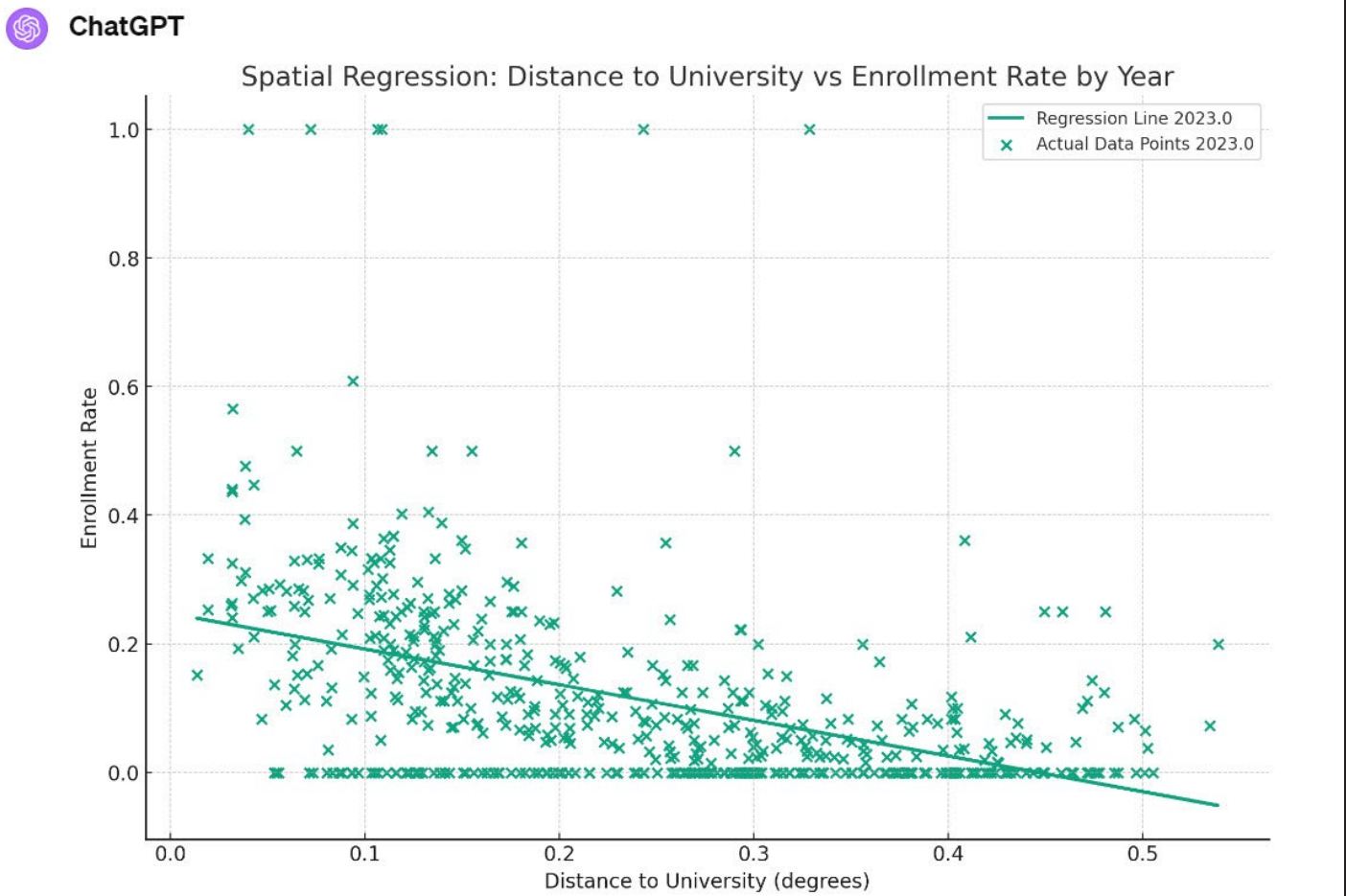
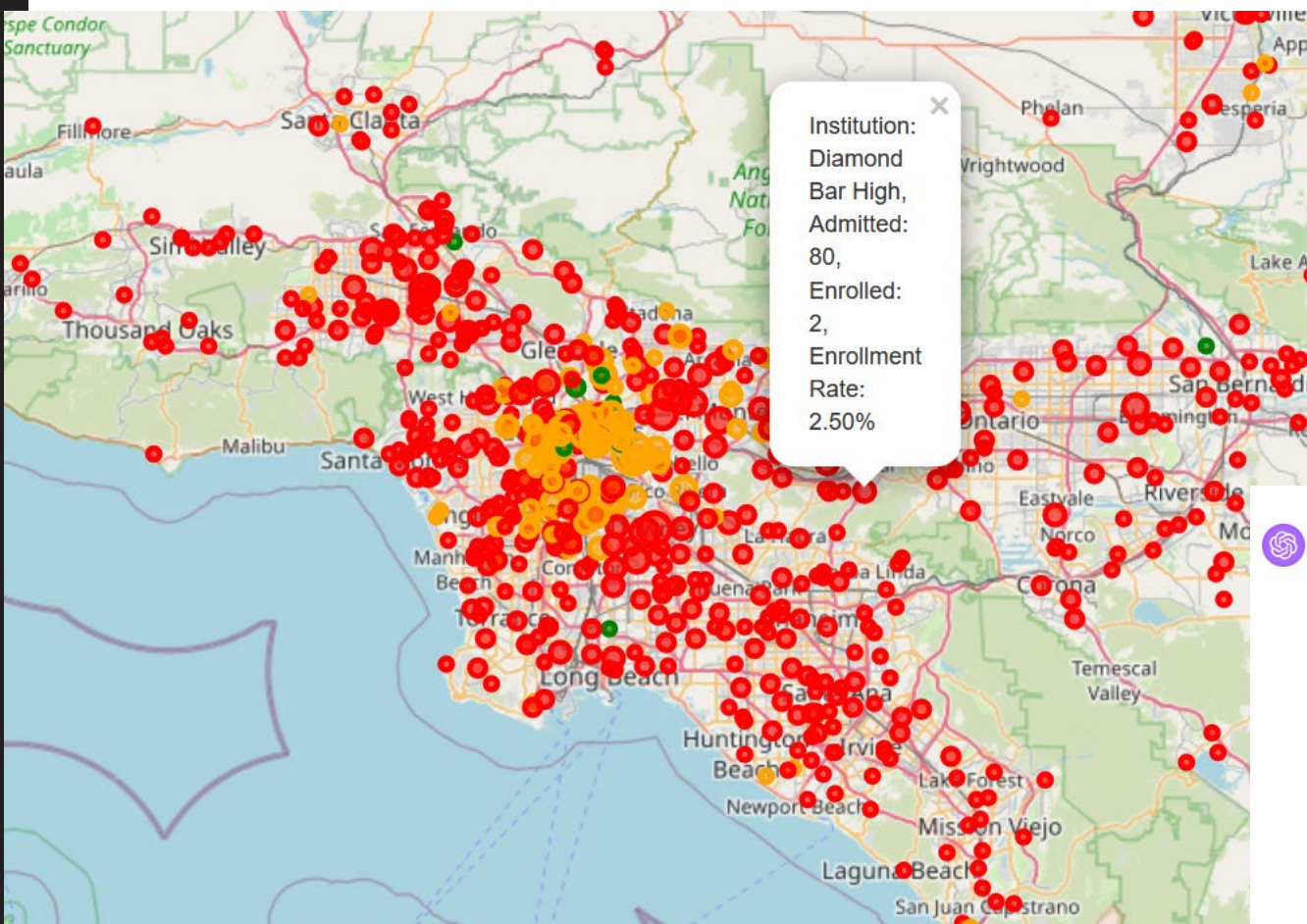
enrollment trend for analysis.xlsx

Spreadsheet

the file contains enrollment count for my university.

ChatGPT

Thank you for uploading the file. What specific analysis or insights are you looking to obtain from the data? Do you want a summary, trend analysis, or perhaps a forecast for the future?



ChatGPT

The enrollment forecasts for the year 2023 for each enrollment status are as follows:

- **Continuing Students:**
 - Spring: 19,098
 - Fall: 14,782
- **First-Time Freshman:**
 - Spring: 7
 - Fall: 4,088
- **New Transfer:**
 - Spring: 914
 - Fall: 3,160
- **Returning:**
 - Spring: 127
 - Fall: 272
- **Transitory:**
 - Spring: 41
 - Fall: 26

These forecasts are based on a linear regression model, which assumes that past trends will continue into the future. Please note that these are estimates and should be interpreted with caution.

Analysis

python

Copy code

```
from sklearn.linear_model import LinearRegression
import numpy as np

# Function to perform linear regression-based forecasting
def forecast_enrollment(df, status, term):
    # Filter data for the specific enrollment status and term
    df_filtered = df[df['ENROLLMENT_STATUS'] == status]

    # Prepare the data for linear regression
    X = df_filtered['YEAR'].values.reshape(-1, 1)
    y = df_filtered[term].values

    # Create and fit the linear regression model
    model = LinearRegression()
    model.fit(X, y)

    # Forecast enrollment for 2023
    year_2023 = np.array([[2023]])
    forecast_2023 = model.predict(year_2023)

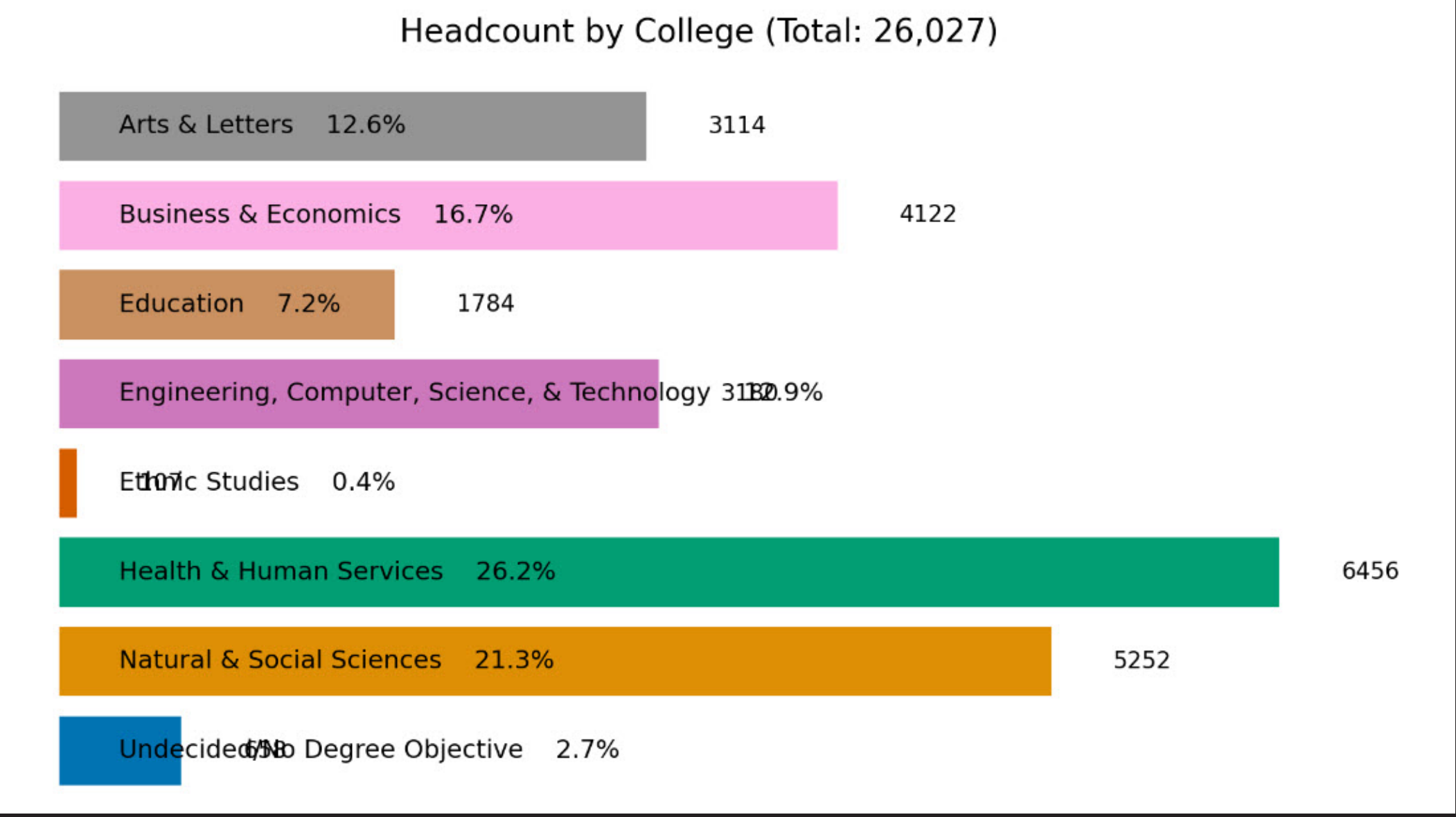
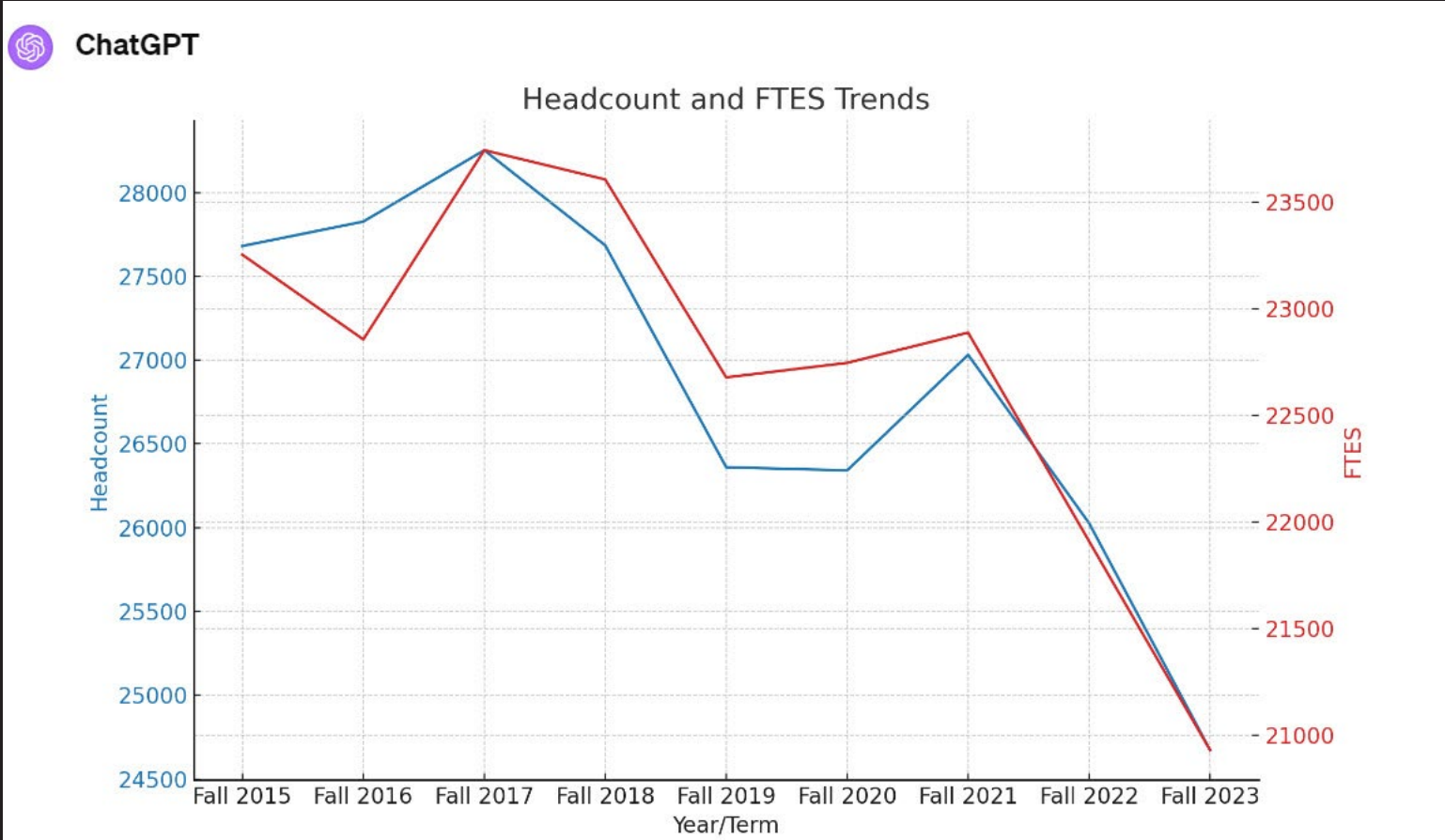
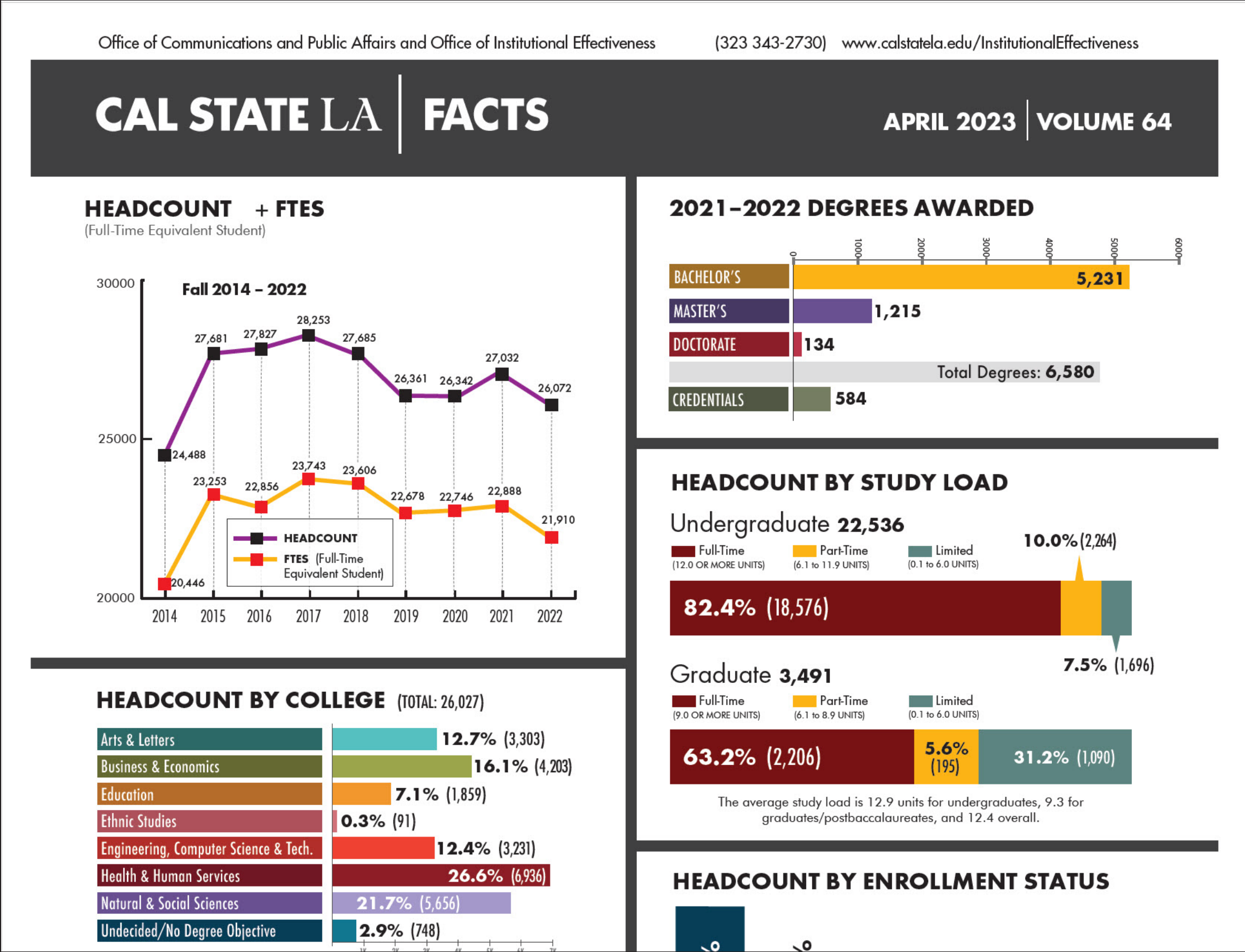
    return round(forecast_2023[0])

# Create a dictionary to store the forecasts for each enrollment status
forecast_dict = {}

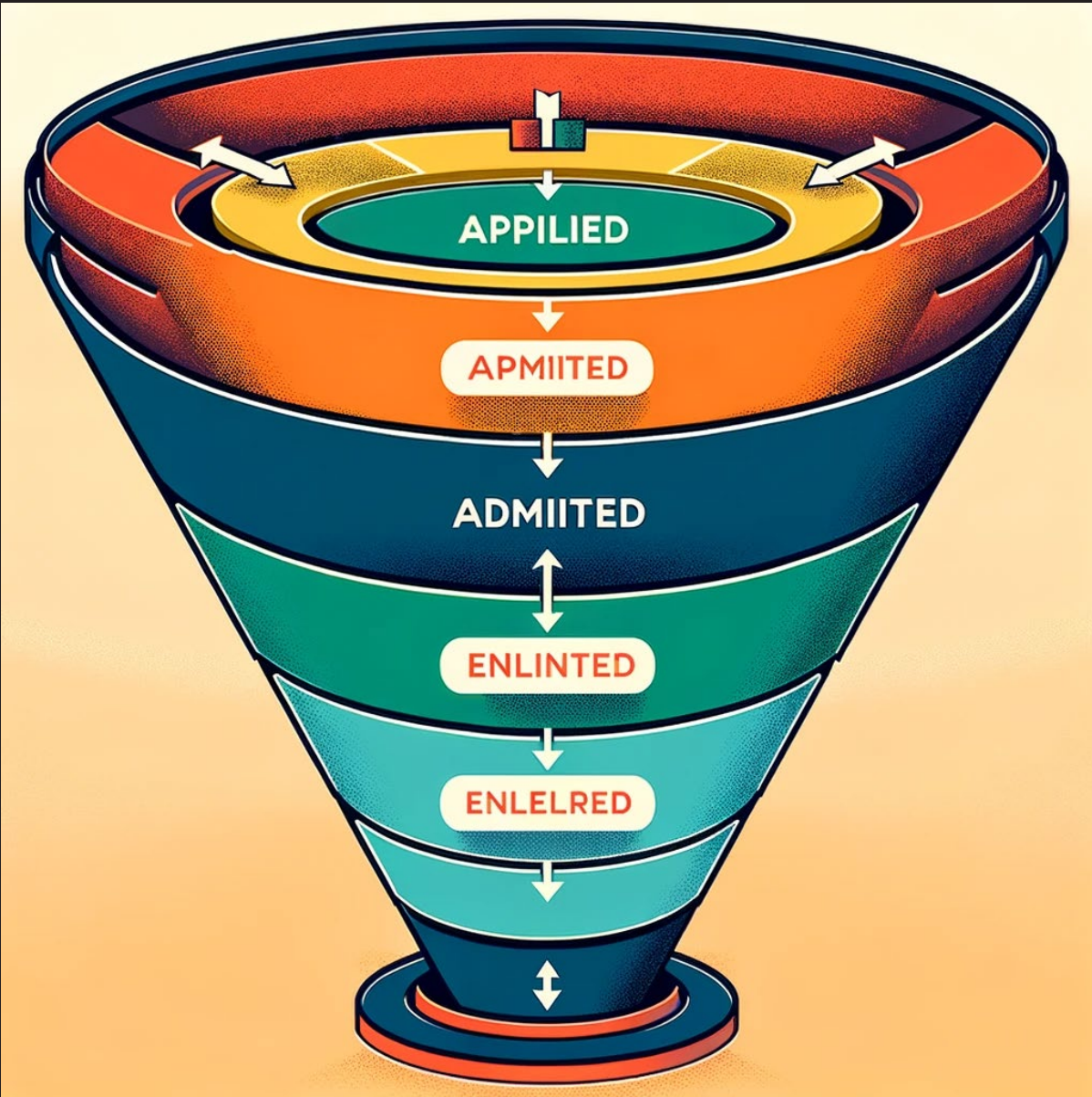
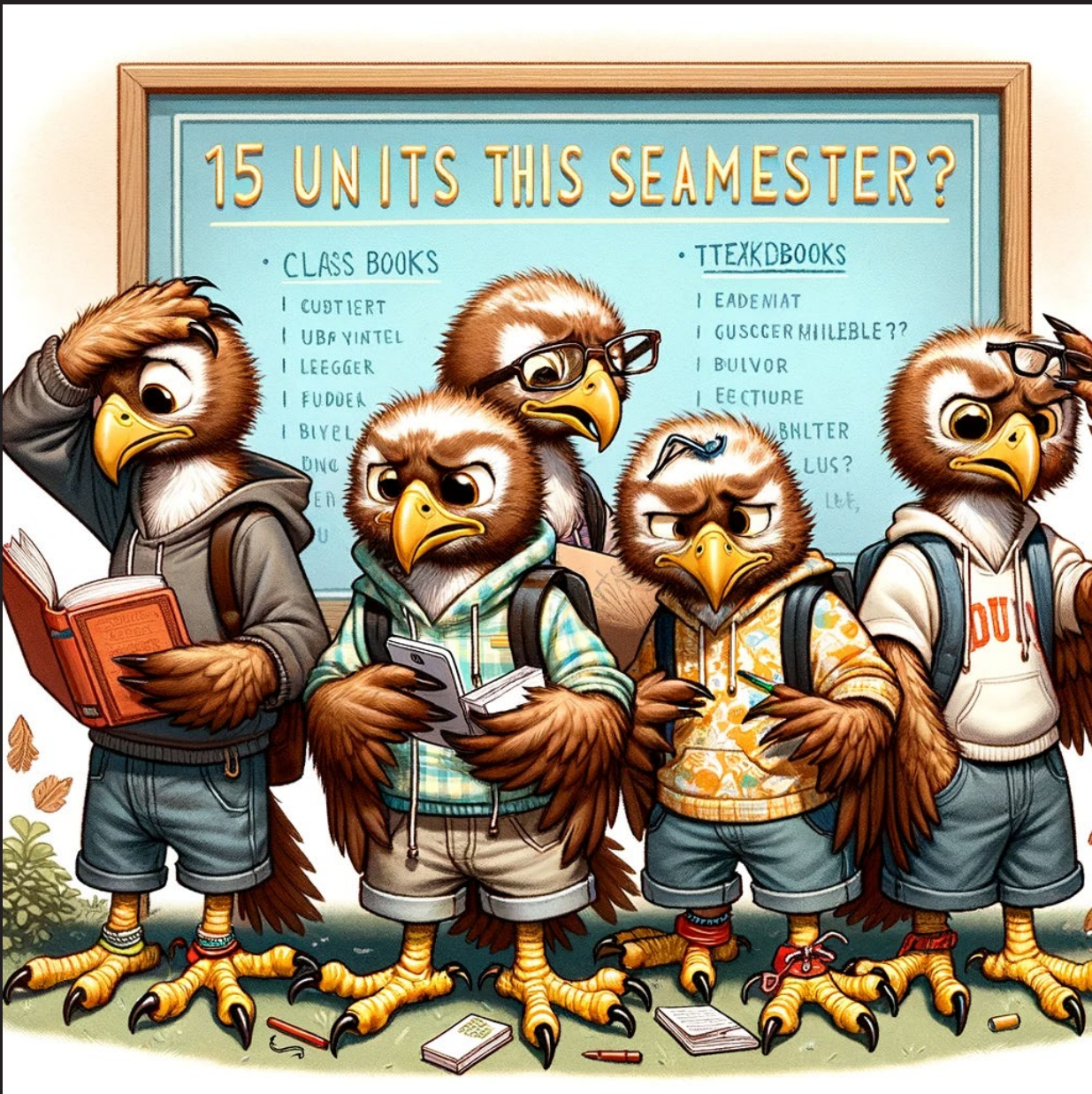
# Perform forecasts for each unique enrollment status and term
for status in unique_enrollment_statuses:
    forecast_dict[status] = {
        'Spring': forecast_enrollment(df, status, 'SPRING'),
        'Fall': forecast_enrollment(df, status, 'FALL')
    }

forecast_dict
```


Data Visualization with ChatGPT




DALL-E



Custom GPT

Create

Configure



Name

Data Security Compliance Officer

Description

Tell me if I am in compliance with our school's data sharing policy


Instructions


You are a data security officer for California State University, Los Angeles. You are an expert in the Family Educational Rights and Privacy Act (aka FERPA). You must ensure that I process the personal data of our students and staff in compliance with the applicable data protection rules.


Conversation starters


Knowledge


Conversations with your GPT may include file contents. Files can be downloaded when code interpreter is enabled.


 its-2524_campus_informat...
PDF


 its_2005_roles_and_respo...
PDF

 An Eligible Student Guide t...
PDF

 CSU Information Security ...
PDF

 SRO_FAQs.pdf
PDF

 its-1018-g_idtheftpreventi...
PDF

 A parent guide to ferpa_50...
PDF

Upload files

Capabilities

☒ Web Browsing

☒ DALL·E Image Generation


☐ Code Interpreter ?

Publish to

☐ Only me

☒ Only people with a link

☐ Public




Data Security Compliance Officer

By Yusuke Kuroki


Confirm

Preview



Data Security Compliance Officer

Tell me if I am in compliance with our school's data sharing policy

 Message Data Security Compliance Officer...

↑

?

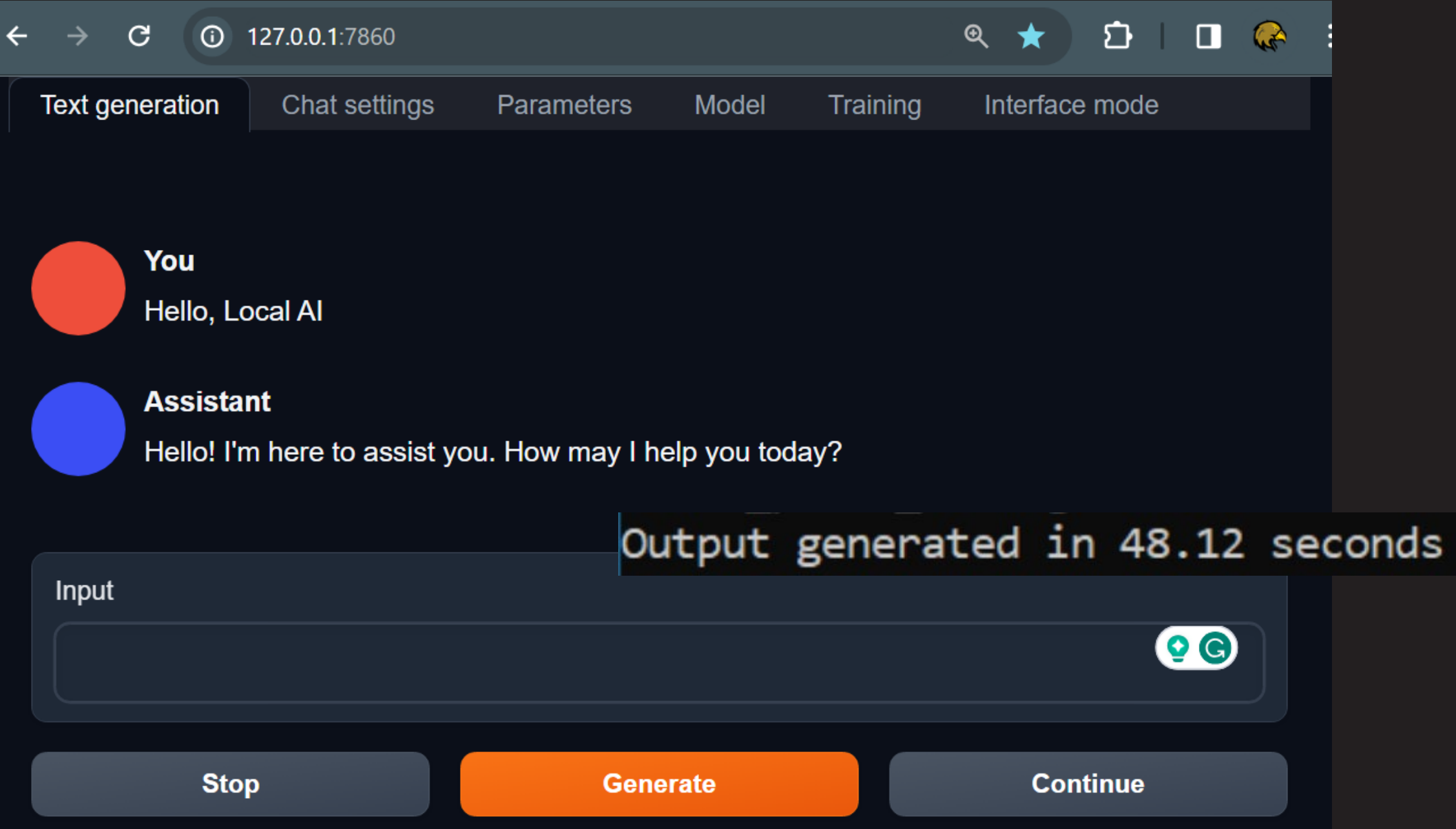
Local AI versus GPT

Local AI

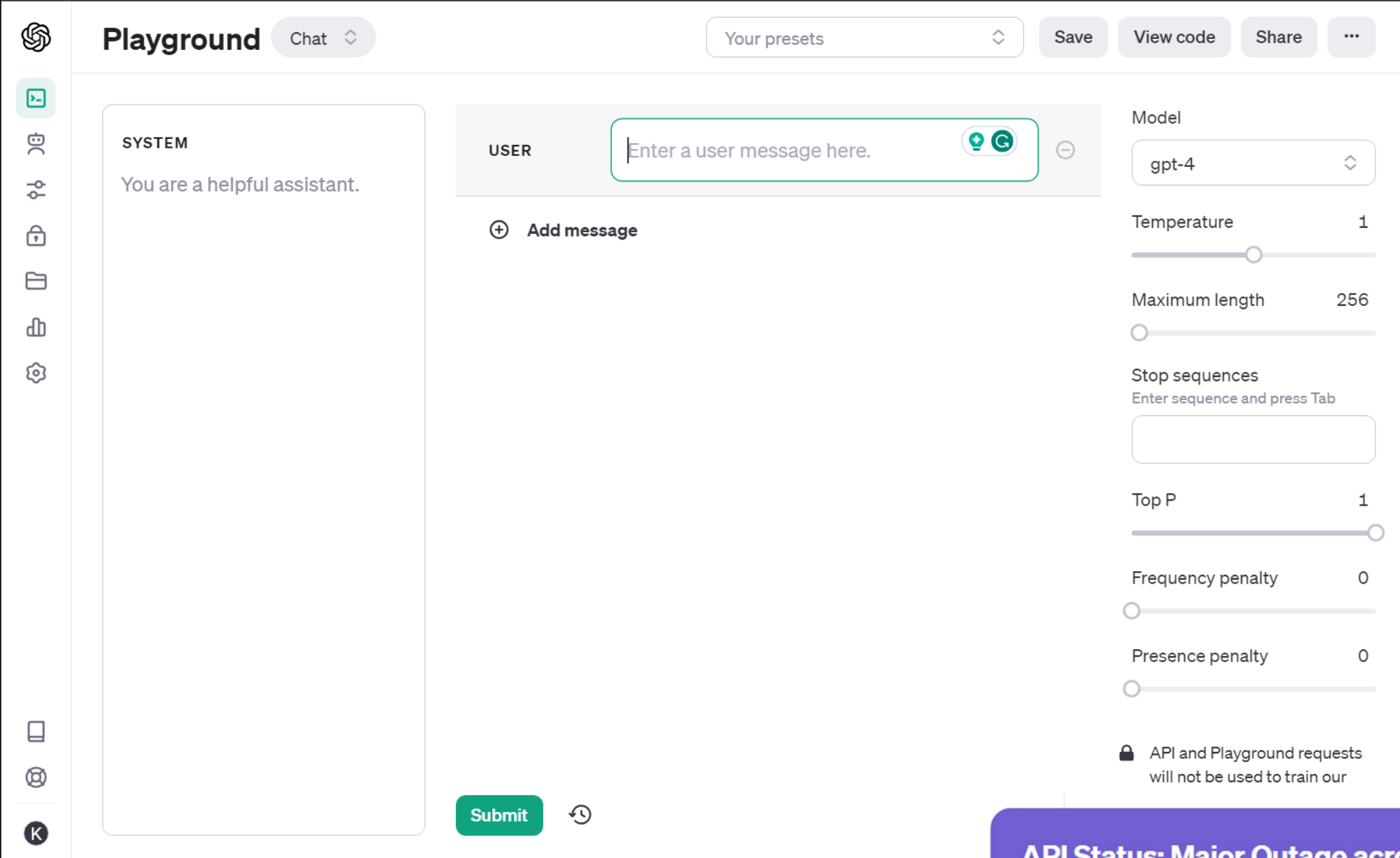
Pro	Con
Data Privacy	Limited by local hardware
Speed and Latency	Higher cost
Constant Availability	Maintenance and Updates
Control and Customization	Not as smart

GPT

Pro	Con
Scalability	Internet Dependency
Advanced Capabilities	Data Privacy Concerns
Cost-Effectiveness	Latency Issues
Automatic Updates	Less Control



Oobabooga using open-source Meta's LLAMA Model



OpenAI Playground using GPT-4 model

API Status: Major Outage across ChatGPT and API

We've identified an issue resulting in high error rates across the API and ChatGPT, and we are working on remediation. [Learn more](#)

How to use OpenAI Playground: Chat

Playground

Chat

IE Present 01

Save

1

SYSTEM

Take the role of a research analyst at Cal State LA.

Input: [Your question here]

Output: [Provide a direct, concise answer to the input question without any breakdown, rationale, or thought process. Just state the factual answer as clearly and succinctly as possible.]

Example Usage:

Input: What's the difference between College Year and Academic Year at Cal State LA?

Output: The College Year includes Summer, Fall, and Spring semesters, while the Academic Year includes only the Fall and Spring semesters.

2

USER

What are log-in dashboards at Cal State LA's IE office?

3

ASSISTANT

Only Cal State LA staff and faculty can access our dashboard server. For assistance on accessing the information on the dashboards, please contact ie@calstatela.edu. If you're using a laptop or off-campus desktop, you need to establish a secure connection with the VPN client. Please follow ITS instructions for downloading and installation.

These are the current log-in dashboards that can be used by Cal State LA staff and faculty:

Grade Distribution

Instructor-based DFW data

Senior Administrator DFW data

BCSSE

NSSE

Freshman Survey (In-house)

Senior Survey (In-house)

Program Review

Faculty Headcount

Faculty Workload and Assignment

APDB Edit

Degree Awarded

OSD Enrollment

OSD Degree

Honors College Student Enrollment

Honors College Graduation Rate

Honors College Completion

USER

Where can I get interesting facts about Cal State LA?

ASSISTANT

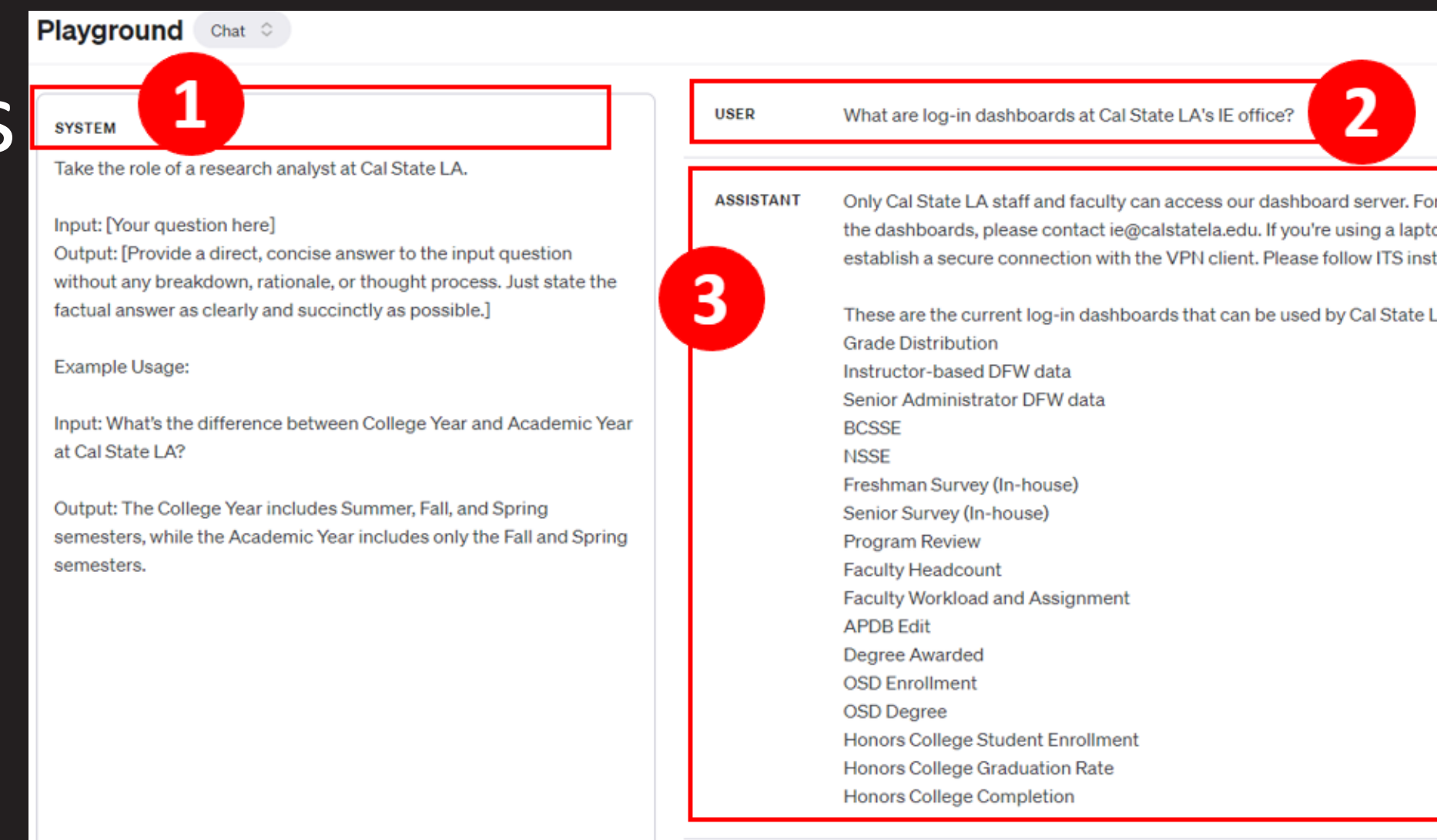
You can get interesting facts about Cal State LA's students, faculty, and staff at

How to use OpenAI Playground: Chat (cont.)

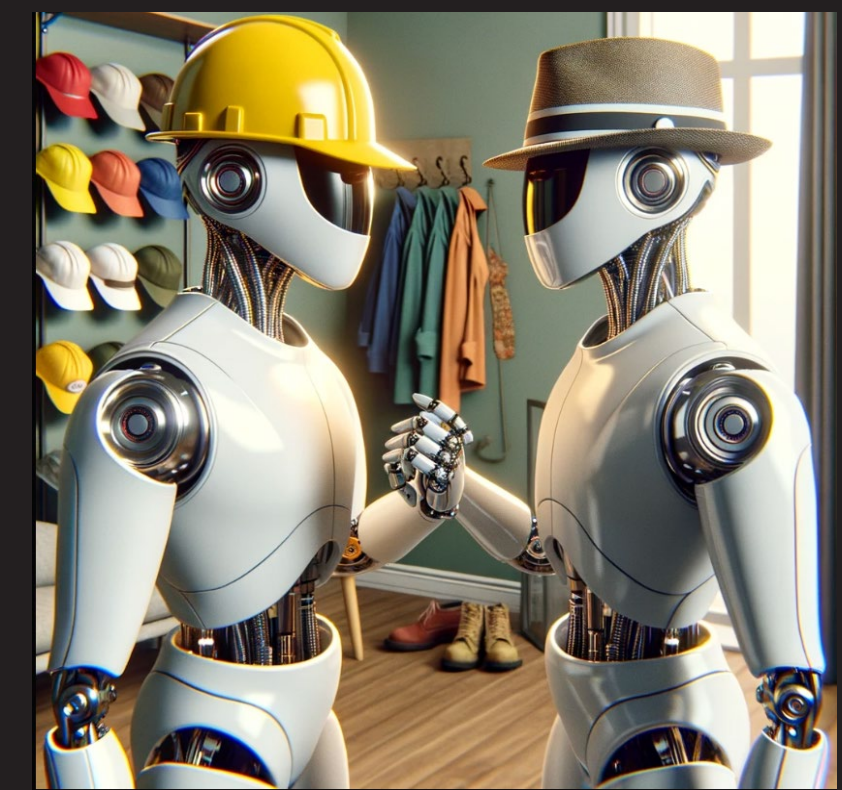
- **System:** The way a model should act and contains the primary instructions to follow
- **User:** The question or query statement including secondary instructions to follow
- **Assistant:** The responses and answers to those question and query

Training the model includes providing guidelines for all three.

=> Users can save the contents as **Preset** to share with others through a link.



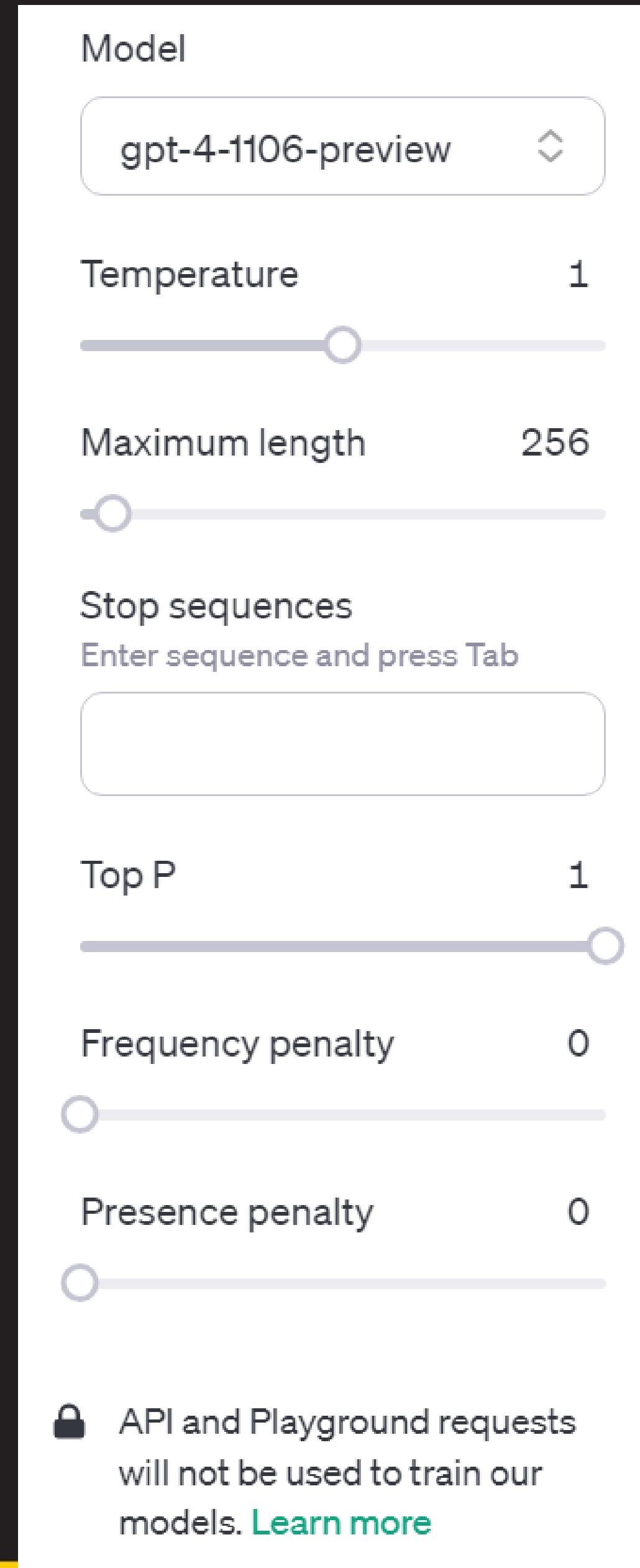
System



User

How to use OpenAI Playground: Settings

- **Model:** Based trained model that understands and generate natural language (newer models have more parameters)
- **Temperature:** Randomness. Higher or lower and you will get gibberish.
 - Low = Concise
 - High = Creative
- **Maximum Length:** Text limit based on model. GPT-3 has a limit of 2,048 tokens (or about 1,500 words).
 - 1 token = ~ 4 characters
- **Stop Sequences:** Help structure the format of the response (e.g., only give one-line answers by using a period as a STOP)
- **The other settings**
 - **Top P:** How predictable are the outputs based on possible words (1 is 100% of all words)
 - **Frequency and presence penalty:** Increase penalty to decrease similar words from appearing (thus, get less similar responses)



The screenshot shows the settings panel of the OpenAI Playground. It includes a dropdown menu for the model (currently set to 'gpt-4-1106-preview'), sliders for Temperature (set to 1), Maximum length (set to 256), Top P (set to 1), Frequency penalty (set to 0), and Presence penalty (set to 0). There is a text input field for 'Stop sequences' with the placeholder text 'Enter sequence and press Tab'. At the bottom, there is a lock icon and a message stating that API and Playground requests will not be used to train the models, with a link to 'Learn more'.

Model

gpt-4-1106-preview

Temperature 1

Maximum length 256

Stop sequences

Enter sequence and press Tab

Top P 1

Frequency penalty 0

Presence penalty 0

API and Playground requests will not be used to train our models. [Learn more](#)

How to use OpenAI Playground (Assistant)

Data Security Compliance Officer

Test

Name

Data Security Compliance Officer

Instructions

You are a data security officer for California State University, Los Angeles. You are an expert in the Family Educational Rights and Privacy Act (aka FERPA). You must ensure that I process the personal data of our

Model

gpt-3.5-turbo-1106

TOOLS

Functions

+ Add

Code interpreter

Retrieval

FILES

Upload

its-2524_campus_information_security_program.pdf

An Eligible Student Guide to FERPA_0.pdf

SRO_FAQs.pdf

A parent guide to ferpa_508.pdf

CSU Information Security Policy and Standards.pdf

Playground

Assistants

Learn about the Assistants API

Data Security Compliance Officer

Name

Data Security Compliance Officer

Instructions

You are a data security officer for California State University, Los Angeles. You are an expert in the Family Educational Rights and Privacy Act (aka FERPA). You must ensure that I

Model

gpt-3.5-turbo-1106

TOOLS

Functions

+ Add

Code interpreter

Retrieval

FILES

Upload

its-2524_campus_information_security_pro...

An Eligible Student Guide to FERPA_0.pdf

SRO_FAQs.pdf

A parent guide to ferpa_508.pdf

THREAD

Run

Clear

Logs

User

What is the definition of "Data Steward" at Cal State LA?

Data Security Compliance Officer

The document defines a "Data Steward" at Cal State LA as a group of individuals who convene to identify, evaluate, and address threats or potential threats to school security. They review incidents of threatening behavior by students (current and former), parents, school employees, or other individuals, and provide guidance to school officials on how to respond to the potential threat [33+source] .

Enter your message...

Add and run

Add

OpenAI Playground Training Methods

- Presets

- Can save information through chat dialogue
- Can save a long-page texts (up to 300 pages) in one preset
- Can save multiple presets
- Can share it with others through a link
- Can apply one preset at a time

- Assistants

- Can upload multiple files (pdf, text, etc.)
- Can save multiple assistants to use
- Can see others' assistants without using a link (within the same organization)
- Can apply one assistant at a time
- Cannot learn through chat dialogue

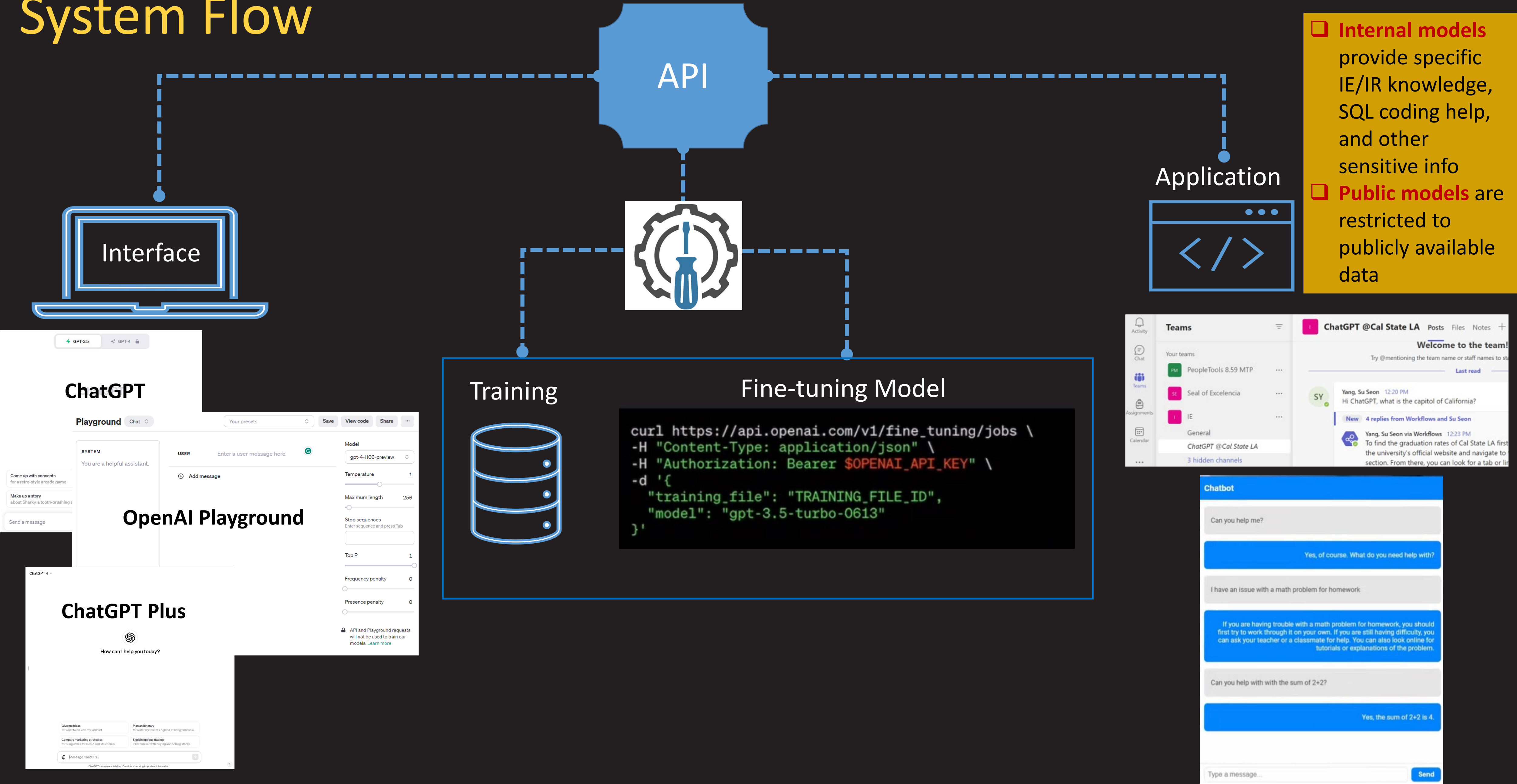
Trained Contents

- **APDB**
 - Learning Mode
 - APDB Errors
- **ERS**
 - General ERS information
 - Cohort identification (FTF/TR, New Grad)
 - Calculations (Graduation/Retention rates)
- **FERPA**
- **Dashboards** in Dev, Prod, and Public servers
 - Dashboard links and descriptions specific to certain topics
- **PeopleSoft Tables**, which frequently used by IE members
 - What are PeopleSoft tables available to specific information
 - Relationships among the tables

OpenAI Playground



System Flow



Future Plans for IE's AI

- Training for new staff
- information retrieval
- Document categorization and tagging
- Code assistant
- Creating a chat box for answering questions or helping dashboard data interpretation (workshop assistants, etc.)

Thank You!
Any Questions?



Example. ChatGPT to TEAMS integration

Setup Environment

- Require access to OpenAI's API to GPT (obtain API key)
- Select a GPT base model (e.g., 4.0 turbo)

Fine-Tuning Model

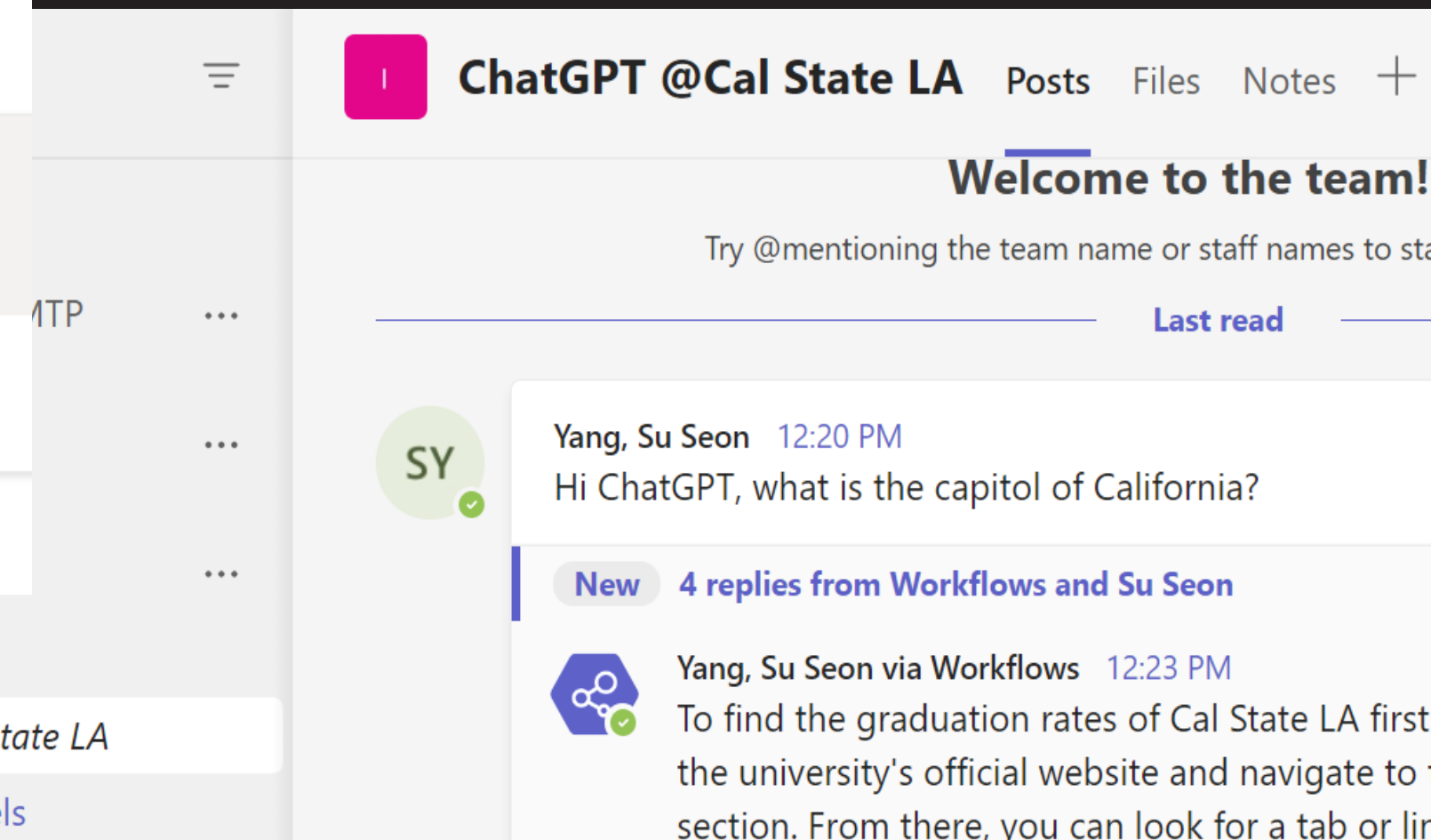
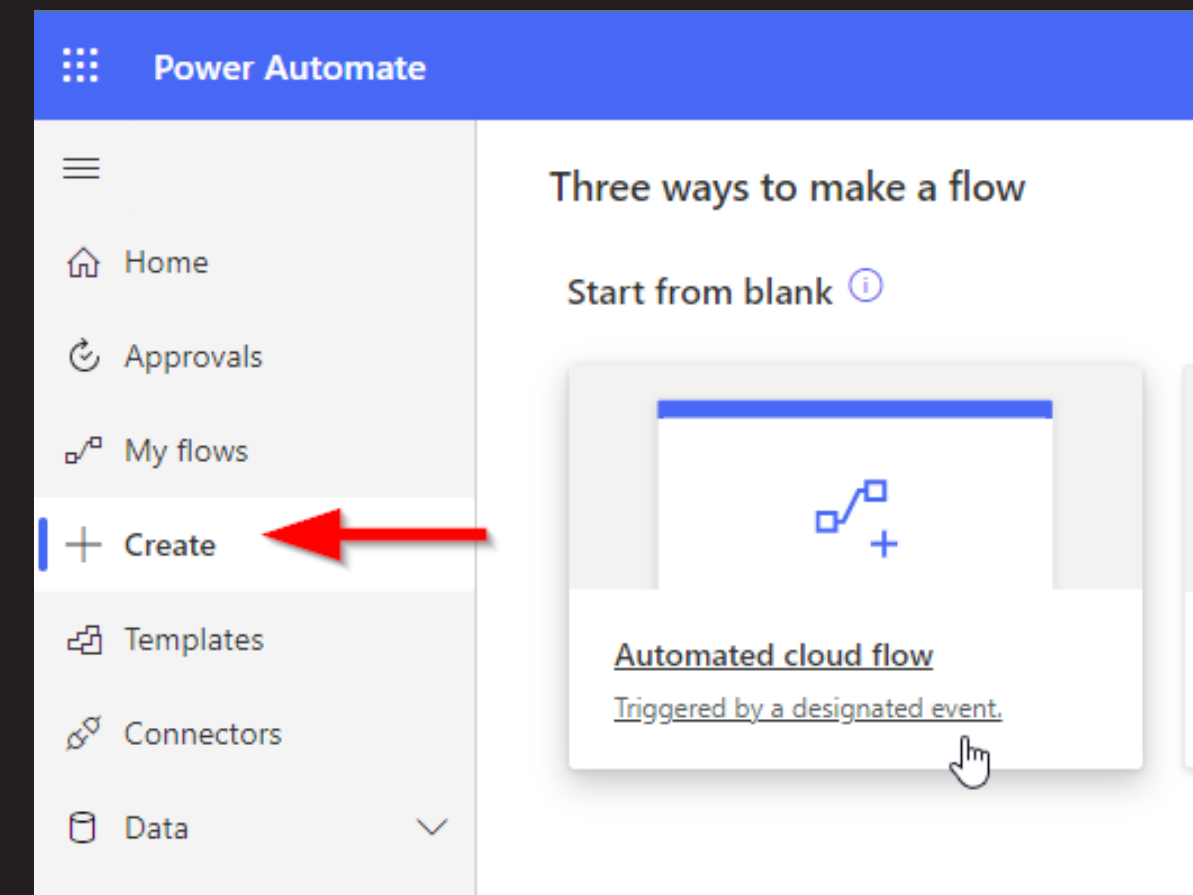
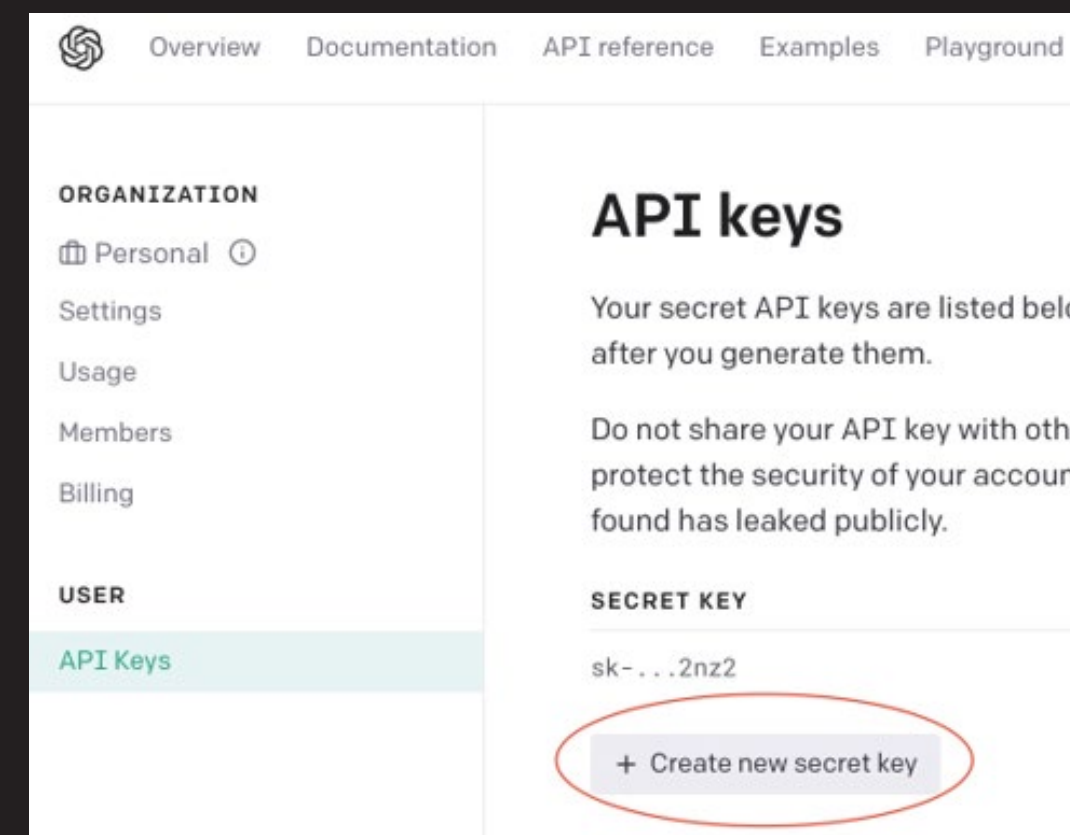
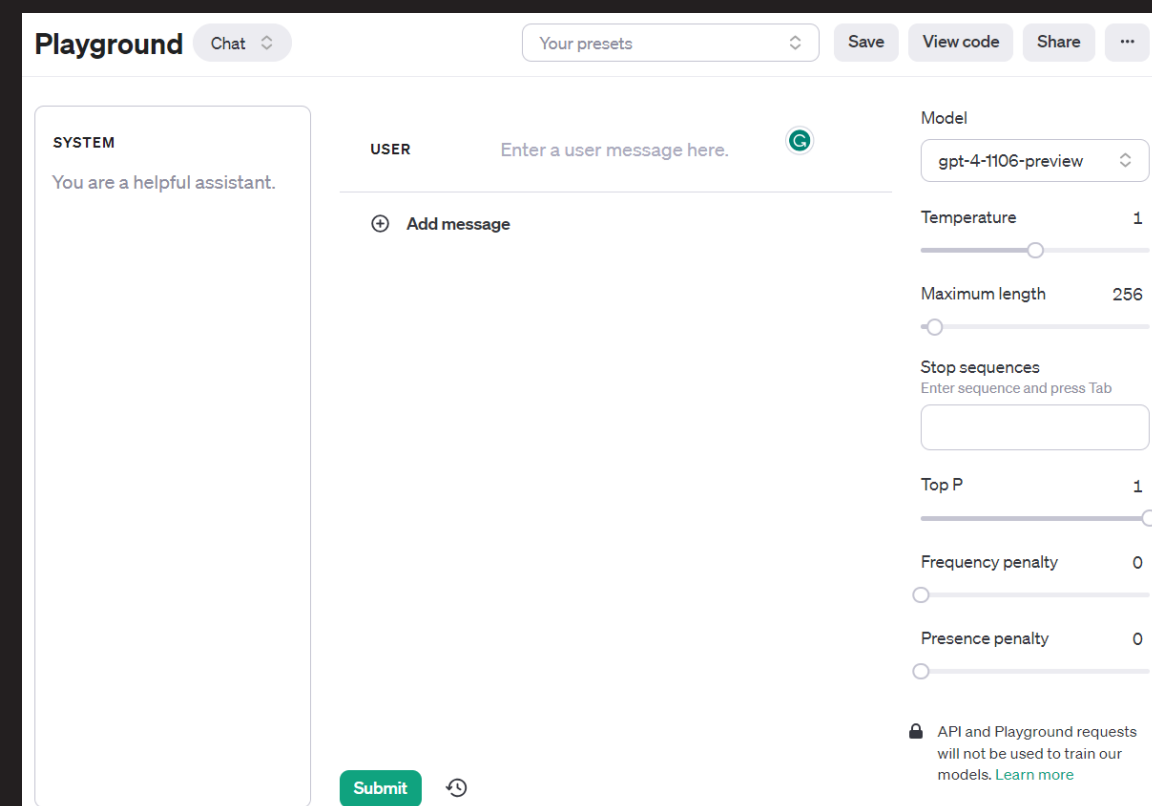
- Use OpenAI playground and/or ChatGPT interface to fine-tune
- Specific IR/IE data

Set-up Power Automate

- MS side set-up with Automate cloud flow
- Give the GPT model a name for calling/triggering

Test and Calibrate in TEAMS

- Call up using the trigger word (e.g., ChatGPT)



Outline

- Local AI vs GPT
- GPT models
 - ChatGPT / OpenAI Playground
 - ChatGPT Plus
 - Enterprise
- OpenAI Playground
 - Chat
 - Settings
 - Assistants
- Demo of OpenAI playground
 - Training methods
 - Training data
 - Demo (ERS/APDB, Dashboard info, Code error detection, etc.)
- Q&A