



IMMERSION WEEK: GENERATIVE AI IN LANGUAGE INSTRUCTION

SESSION 2

WEDNESDAY, DECEMBER 4, 2024



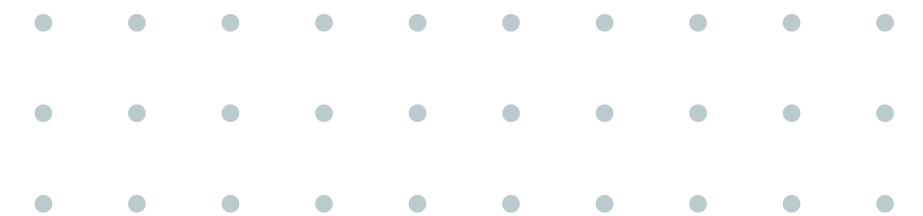
ANNOUNCEMENTS

- Sessions will be recorded (except student panel in session 4).
- The last slide of each session includes resources to further explore the topic(s) presented.
- These materials will be posted in [LRC Programming/Events](#) webpage.

- During the presentations, please, remain muted.
- Q&A will take place at the end of the presentation.

- TODAY: Participants attending the CLI Fall Breakfast Meeting remotely, please be sure to switch to the right Zoom link for the CLI event at 10am.

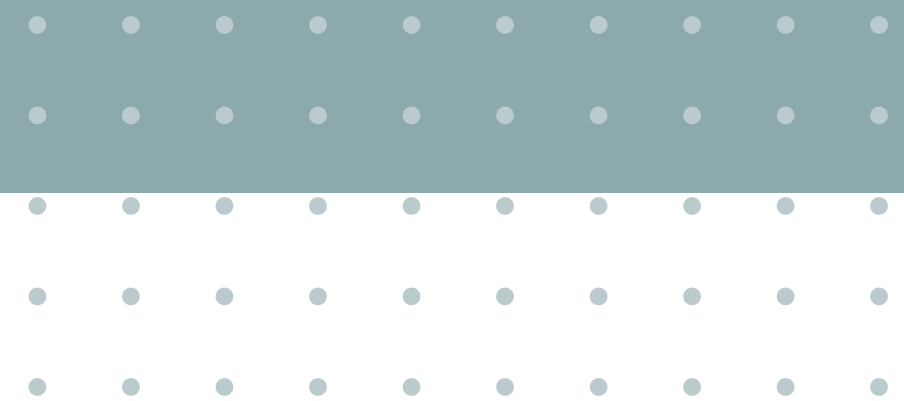
- Funding to cover the ACTFL's member registration fee for the course "[Making AI Work for Language Teachers](#)" (Maureen Lamb) will be available to interested instructors.



GENERATIVE AI FOUNDATIONS

*Rachel Ellen Goc, Learning Engineer
Teaching and Learning Technologies*

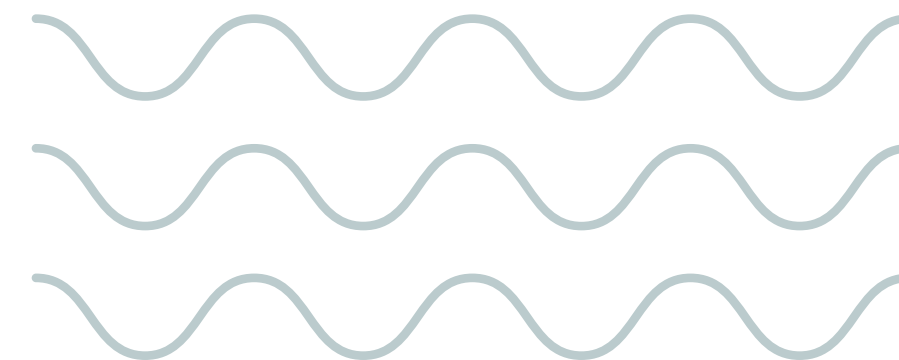
*Planning Contributors: **Victoria Getis,**
Anna Luce and **Matt Taylor,***





SESSION 2 GOALS

- Define foundational vocabulary and concepts related to generative AI
- Carry out basic interactions with Copilot
- Manipulate prompts to gain desired AI-generated output
- Explore AI media tools



HELLO!

Rachel Goc (she/her)

- Learning Engineer
 - How can technology support teaching and learning?
 - Canvas Chatbot
- PhD in Ethnomusicology
 - How do people make meaning and community (through music)?



01.

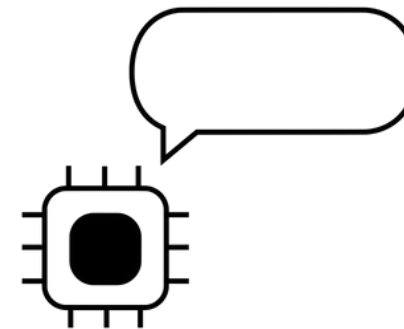
FOUNDATIONAL VOCABULARY





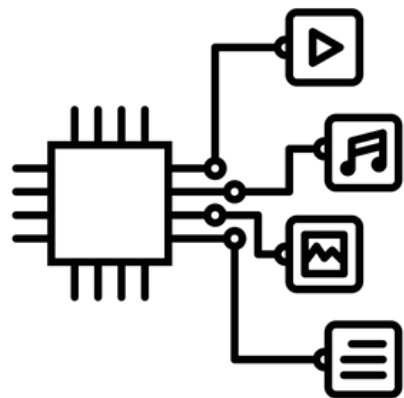
Machine learning

Process by which AI systems learn from data and improve performance, analyzing data and making predictions



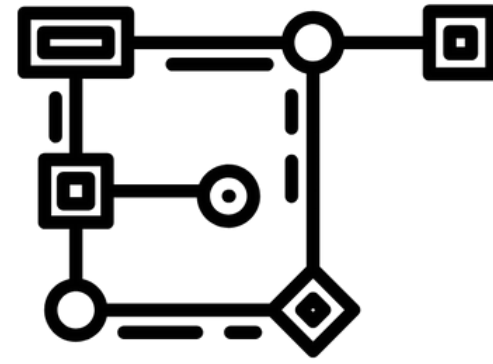
Large Language Models (LLMs)

AI that is trained on large quantities of text in order to interpret prompts and generate human-like text-based outputs



Generative AI

AI model that learns from training data and uses it to generate new content that resembles the original data

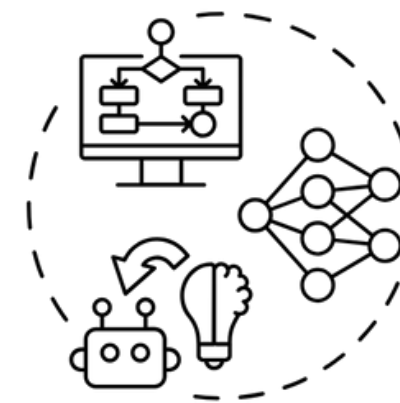
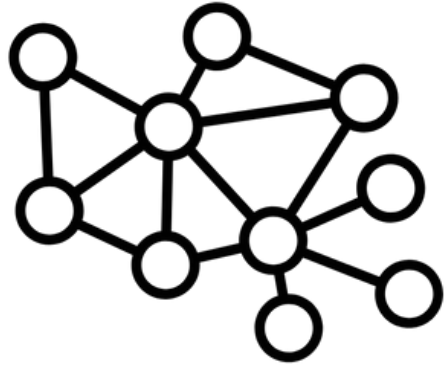


Algorithm

A set of instructions to perform calculations, process data, or problem-solve

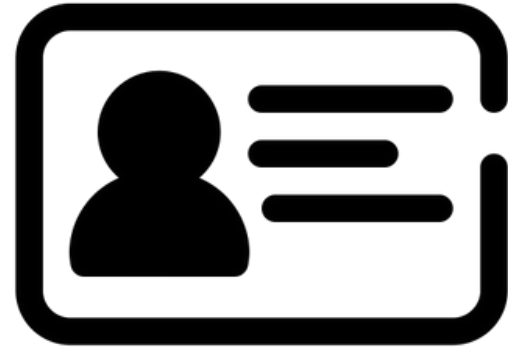
GPT

Generative pre-training transformer, a family of neural network models with interconnected nodes



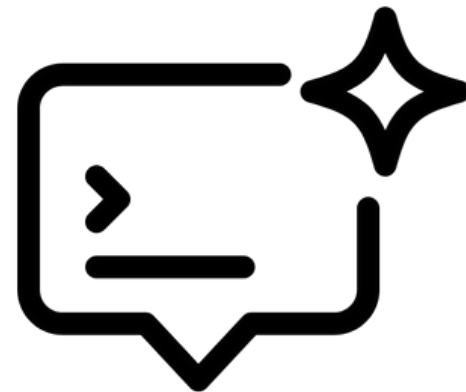
Training the Model

Feeding curated data into an AI model, an iterative and ongoing process



Personally Identifiable Information (PII)

Information that can be used to distinguish or trace a person's identity, ex. Personal address and phone number, biometric records like photographs



Prompt Engineering

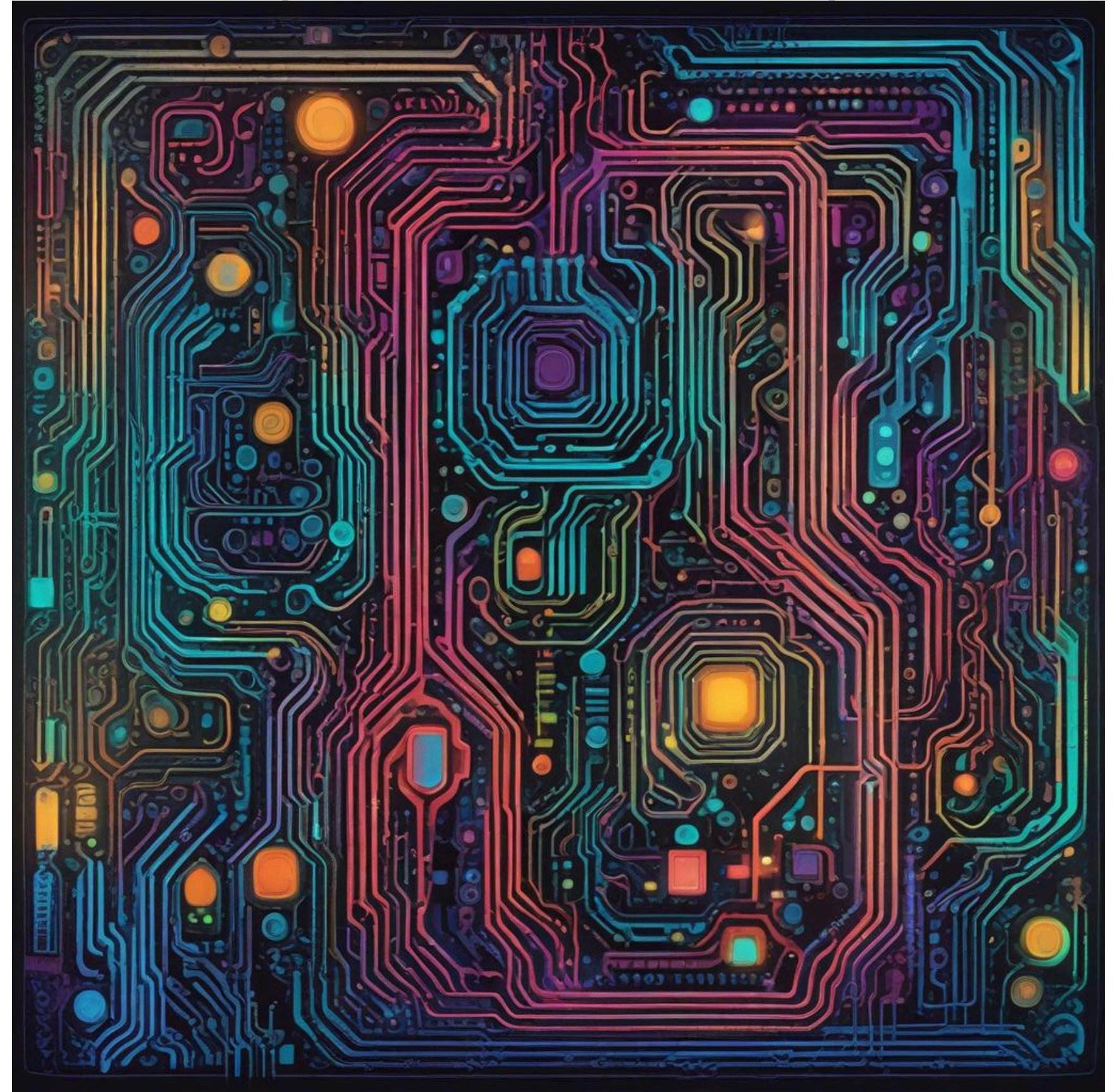
The practice of guiding generative AI to make your desired outputs

SAY IT IN SONG

Brought to you by...

- Lyrics Magic School - Song Generator (lyrics)
- Suno - music generation
- Rachel's prompts

"BRIGHT AND NEW"



Joyful learning, here we go,
Machine learning, info flow.
Data guiding, systems learn,
Performance rises, watch it turn.

Ode to AI, bright and new,
Endless wonders, coming through!
Generative models, new language chart
From the data, they will start!

Large language models, text so grand,
Interpreting prompts, at your command.
GPT, a transformer's might,
Creating language, pure delight!

Algorithms lead the way,
Set of steps, they work and play,
Calculations, data flow,
Solving problems, watch them grow.

Training models, data feeds,
Iterative work, fulfilling needs.
PII, we must protect,
Identity safe, we respect!

Ode to AI, bright and new,
Endless wonders, coming through!
Generative models, new language chart
From the data, they will start!

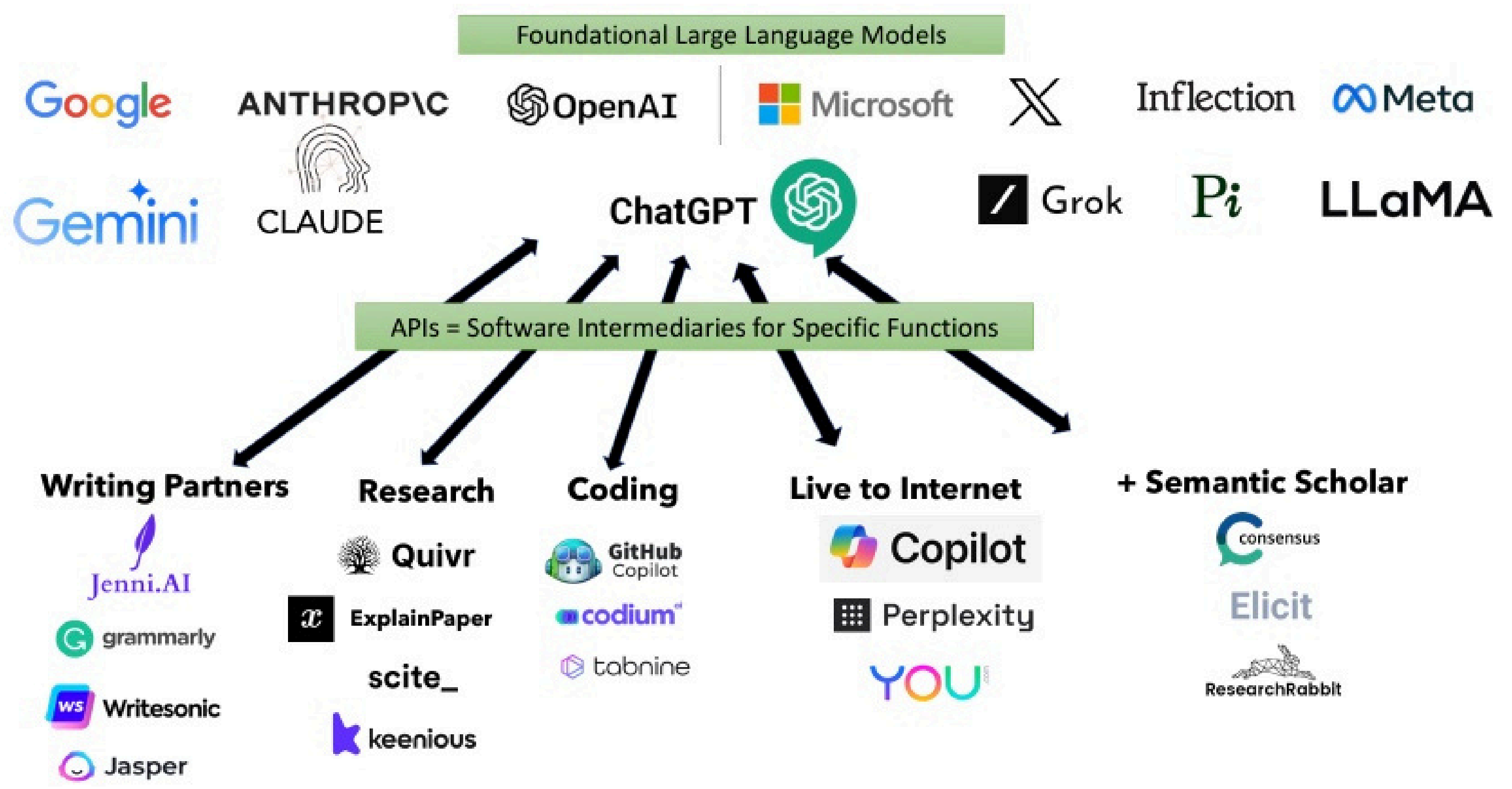
Ode to AI, bright and new,
Endless wonders, coming through!
Prompt engineering, guide the flow,
To desired outputs, let it show!

Joyful learning, here we stand,
AI vocab, hand in hand.
Together we will innovate,
In this journey, we create!

O2.

FOUNDATIONAL CONCEPTS





WHAT'S ON THE INTERNET?

Example: Wikipedia is one publicly available source of data that has been used for decades to train artificial machines.

From Wikimedia's website

- Only 19% of all biographies on Wikipedia are about women
- Only 13% of Wikipedia editors identify as women
- Only 21% of the content on Wikimedia Commons is related to women
- Only 20% of the content on Wikiquote is attributed to women

REFERENCES

Hofmann, V., Kalluri, P.R., Jurafsky, D. et al. AI generates covertly racist decisions about people based on their dialect. *Nature* 633 , (147-154 (2024)

<https://doi.org/10.1038/s41586-024-07856-5>

Obermeyer , Z., Powers, B., Vogeli, C., Mullainathan, S. Dissecting racial bias in an algorithm used to manage the health of populations. *Science* 366, 447-453, (2019)

<https://www.science.org/doi/10.1126/science.aax2342>

Buolamwini, Joy. Artificial Intelligence Has a Problem with Gender and Racial Bias.

Here's how to Solve it. *Time* Feb 7, 2019.<https://time.com/5520558/artificial-intelligence-racial-gender-bias/>

**All of us have a role to play in
contributing to a future of AI use that
is more equitable.**

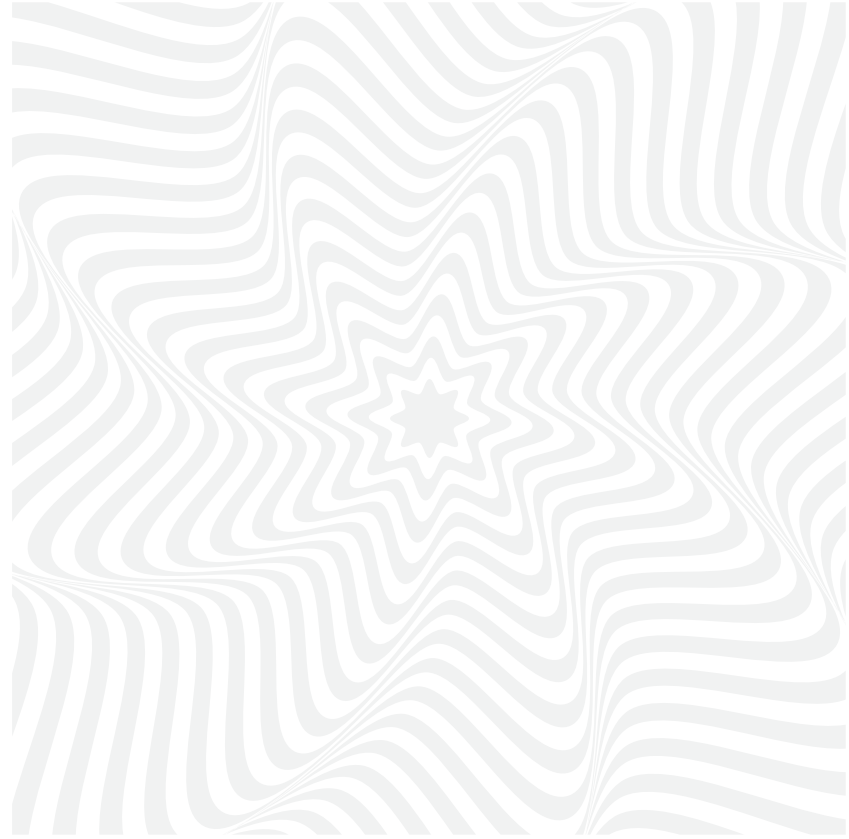
HOW?

COLLECTIVE

- Hire diverse teams and with specific roles that focus on tech ethics
- Build in review into development process
- Add language to contracts
- Create and advocate for laws/policies
 - Ex. New York Local Law 144 of 2021

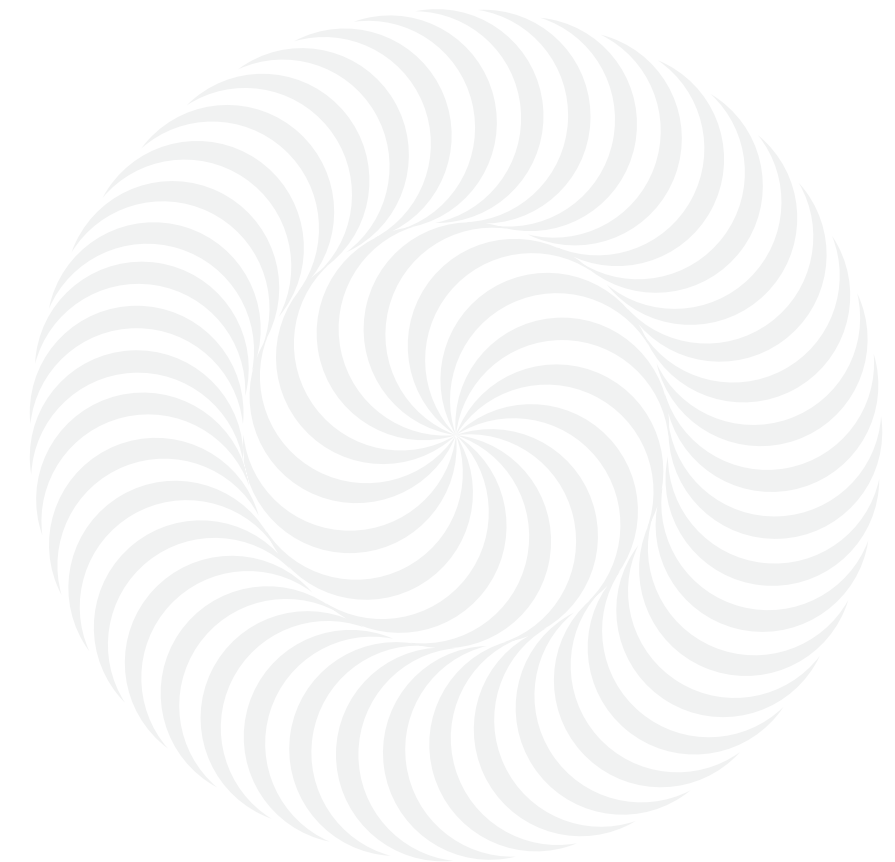
INDIVIDUAL

- Ongoing learning
- Read terms & conditions
- Verify output
- Look for missing voices
- Embed ethics conversations into class
- Connect critical analysis skills to AI use



DETECTION ILLUSION

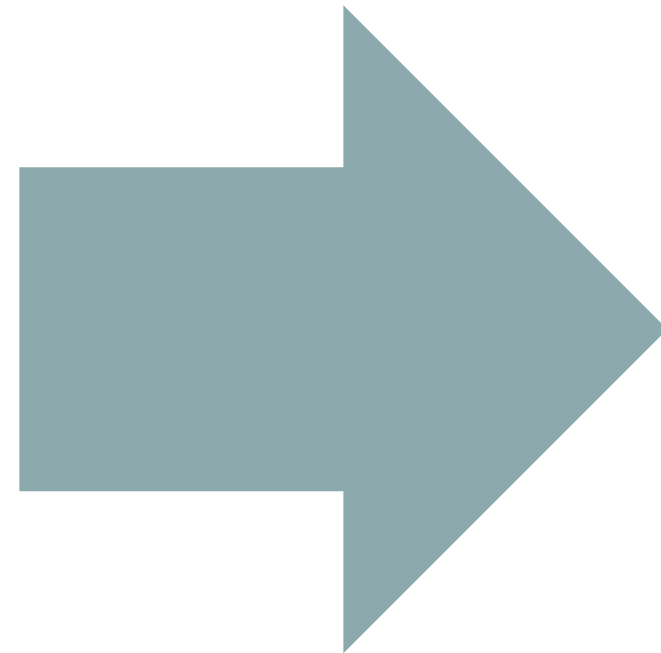
ILLUSIONARY KNOWLEDGE





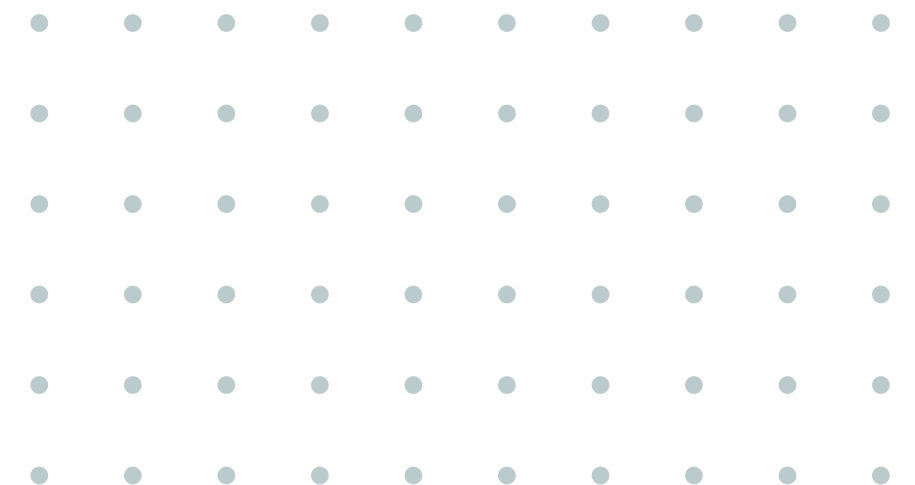
AI MAKES

Early attention to LLMs has been focused on them as tools for doing or making things for us.



AI ASSISTS

Shift student perspective to LLMs as tutors, aids, and assistants in their learning process.



WHAT KINDS OF AI LITERACIES DO I WANT MY STUDENTS TO HAVE ?

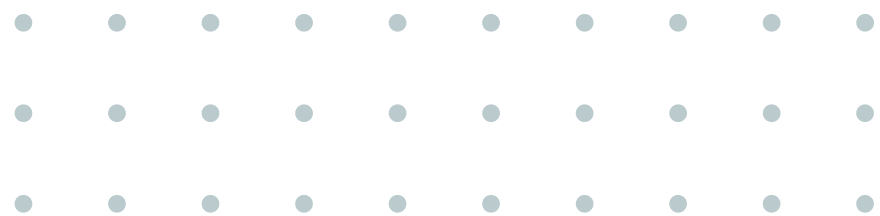
03.

COPILOT AT NORTHWESTERN



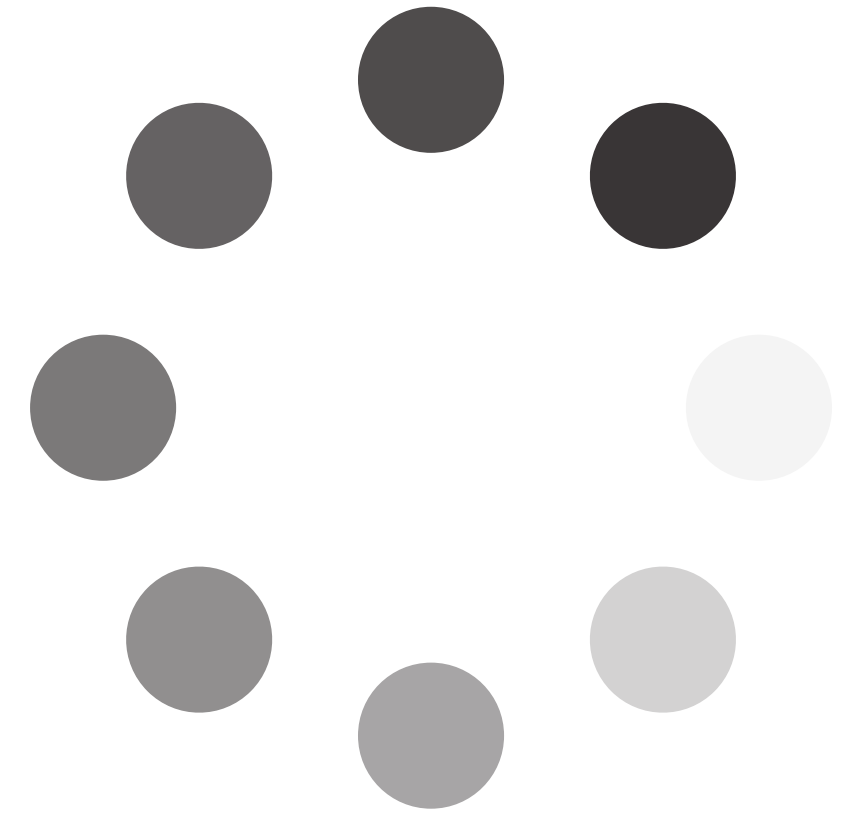
COPILOT

- Available at no-cost to instructors, students, and staff
- Stores input on a protected tenant
- Tries to limit copyrighted or restricted data in responses
- Does NOT train on user input
- Does NOT share your input or uploads with third-part sites



LOGIN NOW

1. Visit bing.com,
2. Click on "Sign in" at the top of the page (use Northwestern credentials),
3. Click on the "Ask Copilot" button.



04.

PROMPT ENGINEERING



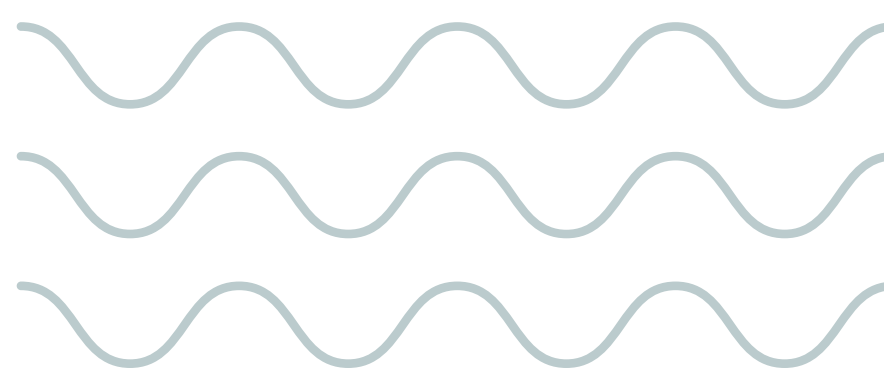
PROMPTS FOR WHAT?



INSTRUCTORS

- Create class materials
- Create study supports
- Brainstorm new activities
- Re-write materials
- Change media/tone/voice on materials

STUDENTS

- Create self-study materials
 - Create or edit for an assignment
 - Practice and self-quiz
- 



C H A R A C T E R

The role you want the tool to play

R E Q U E S T

What you want the tool to do or generate

A D J U S T

Revise, clarify, or edit your initial prompt

T Y P E O F O U T P U T

Provide parameters for your outcome

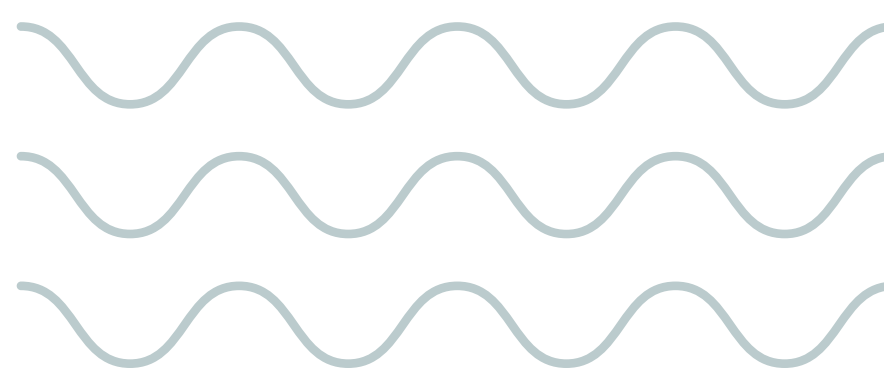
E X A M P L E S

Include examples or additional content



PROMPT EXAMPLES

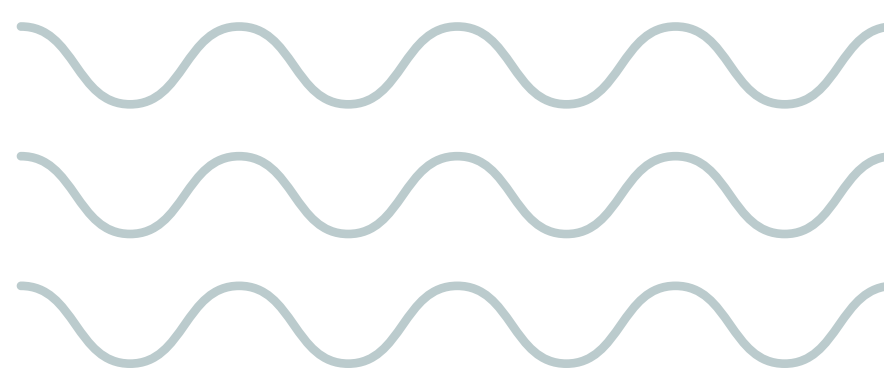
What are the most common misunderstandings about studying a foreign language?

- Refinement: Give me this information in [language].
 - Refinement: Give me three reflection questions in [language] to help students gauge their own mindset about learning a new language
- 



PROMPT EXAMPLES

Dialogue Practice: For this conversation, you are someone who lives in Osaka, Japan in the 2000s. Only respond in Japanese. I am a visitor to Osaka and I will ask you questions about the city. For each question I ask you, ask me another question back about my own hometown. Don't move forward in the conversation until I respond.



05.

HANDS-ON ACTIVITY



ASK FOR...

- A rubric for a specific assignment
- Put in some text and ask it to create questions for students
- A multiple choice quiz on specific vocab/grammar
- Ideas for projects that students could make to demonstrate knowledge of a specific idea or grammar point
- A conversation similar with goals similar to an oral exam
- Try a prompt from the Mollick library: <https://www.moreusefulthings.com/instructor-prompts>

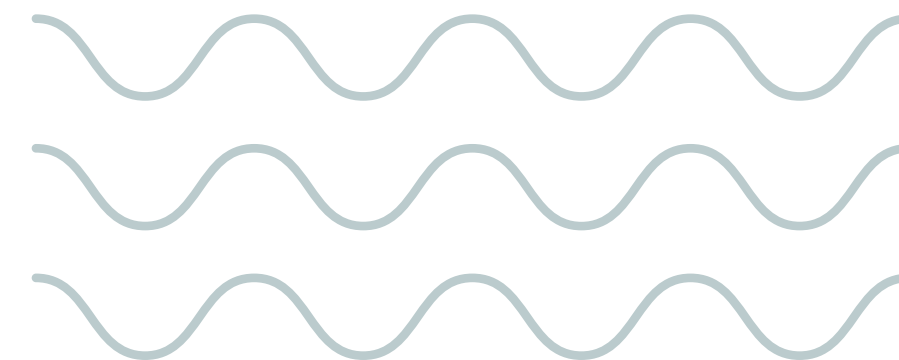
HOW DO YOU EVALUATE THE OUTPUT?

- What skills and resources are you using to judge the quality of the output?
- How can you model and teach verification skills to your students?
- How can the act of verification become part of the learning process?



3 STEP PROCESS

1. Creating an effective prompt
2. Getting something out of generative AI
3. Evaluating output from generative AI



WHAT ARE YOU LEARNING?

Share in chat one thing that was new or interesting to you from the session so far.

06.

AI MEDIA TOOLS TOUR













PROCEED WITH CAUTION



- Copilot is the only tool that Northwestern has a license agreement with
- Be protective of your and your students' data
- Remind students what they shouldn't put into any AI tool.

MAGIC SCHOOL

Individual tools that do the prompt engineering for you.

 Image Generator 🔥 HOT Generate and edit images with AI from Adobe Express.	 Presentation Generator 🔥 HOT Generate exportable slides based on a topic, text, YouTube video, or any...
 Lesson Plan Generate a lesson plan for a topic or objective you're teaching.	 Multiple Choice Quiz / Assessment Create a multiple choice assessment, quiz, or test based on any topic,...
 Report Card Comments Generate report card comments with a student's strengths and areas for growth.	 Text Leveler Take any text and adapt it for any grade level to fit a student's reading level /...
 Informational Texts Generate original informational texts for your class, customized to the topic of...	 Professional Email Generate a professional e-mail communication to colleagues and other...
 Rubric Generator Have AI write a rubric for an assignment you are creating for your class in a tabl...	 Text Summarizer Take any text and summarize it in whatever length you choose.

Tip: Use a combo of Magic School and Copilot

**Focuses on differentiated
and re-leveling learning
materials.**

Diffit

For Teachers

Get student-ready resources for...

 **Literally Anything**

 Article or YouTube Link

 Text or PDF

 Vocabulary List

1. Enter a topic, theme, or question here

e.g. "Gravity", "Why didn't the U.S. participate in Treaty of Versailles?"

Align to Standards: [ELA](#) [History](#) [Science](#)

2. Customize your resources

Reading Level

5th Grade

Language

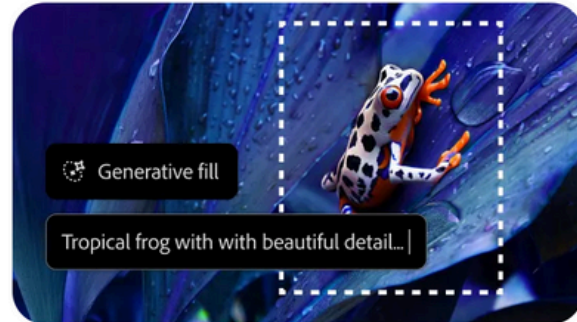
English

Type of Reading

Informational Text

Generate Resources

Adobe Firefly



Generative Fill

Create richer, more photorealistic images with the most advanced Generative Fill yet, now with the power of the latest Adobe Firefly Image Model.

[See how in Photoshop](#)



Text to Image

With the latest Adobe Firefly Image Model, you can create higher-quality images with better composition, photorealistic details, and improved mood and lighting.

[Create with Firefly](#)



Generative Extend

Add frames, lengthen ambient audio, and eliminate awkward cuts. Generative Extend, now in Premiere Pro (beta), lets you easily extend clips using Firefly generative AI.

[See how in Premiere Pro \(beta\)](#)

Text to Image, Generative Fill and Extend

Current Firefly generative AI models trained on a database of licensed content.

Canva


**Text to image, image
manipulation, 1-2
second videos**



SUNO

Lyrics ⓘ Instrumental

Enter your own lyrics or describe a song and click Write About...

 Surprise Me 0 / 3000

Style of Music ⓘ Exclude Styles

Enter style of music

0 / 120

charango merengue rave sound si

**Music generation,
upload custom lyrics or
general prompting**

ElevenLabs

Text to speech, voice changer, dubbing, etc.

TEXT TO SPEECH

VOICE CHANGER

DUBBING

TEXT TO SFX

VOICE CLONING



PROCEED WITH CAUTION



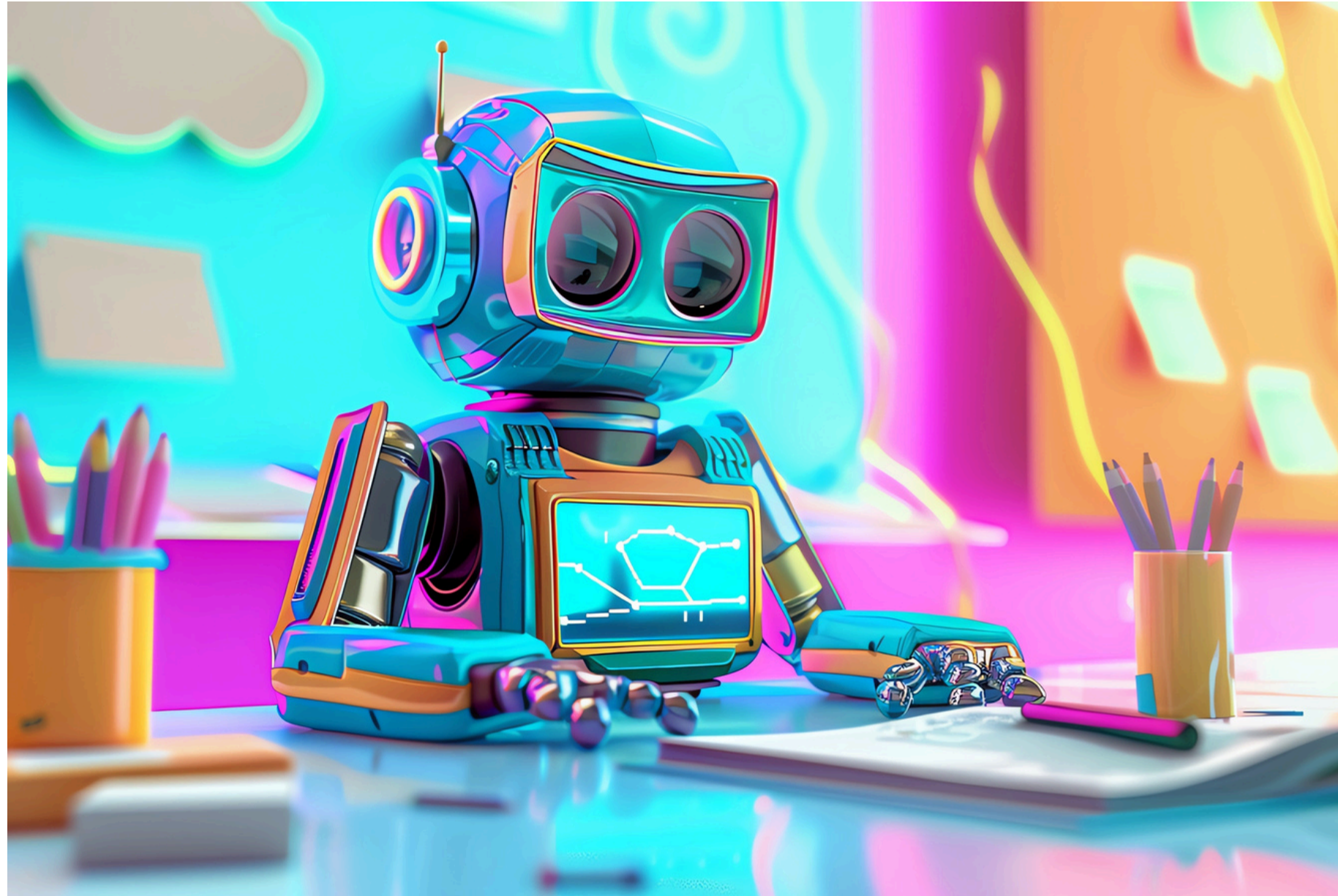
- **Read Terms & Conditions, especially on video tools**
 - **Who owns what you've uploaded?**
 - **Will it be shared with third-parties?**
 - **Will it be used to train AI models?**

07.

AI STUDY TUTORS



AI STUDY TUTORS



- Copilot recommended in combination with
 - AI for Education Student Prompt library
 - (<https://www.aiforeducation.io/prompt-library-for-students>)
 - Mollick Prompt library: Student Tutoring Prompt
 - (<https://www.moreusefulthings.com/student-exercises>)

08.

HANDS-ON ACTIVITY



BLOOM'S REVISED TAXONOMY

This revised taxonomy looks at distinctive human skills versus generative AI supplemental learning. It can be used to consider which activities should remain human-only or which you might begin to include AI.

1. Read the revisited Bloom's Taxonomy
2. Reflect: Have I made any changes already to my course that support distinctive human skills? Where might I be open to supplemental learning through genAI? Are there any tools I want to explore more?

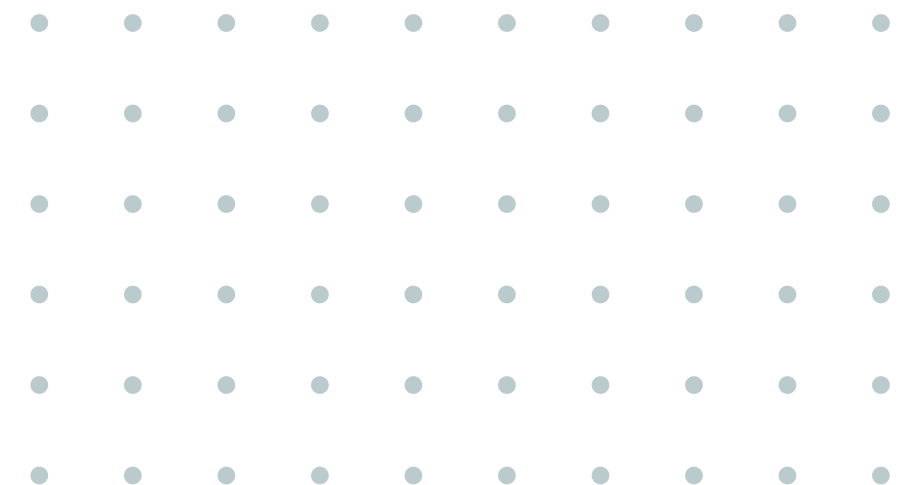
<https://ecampus.oregonstate.edu/faculty/artificial-intelligence-tools/blooms-taxonomy-revisited-v2-2024.pdf>

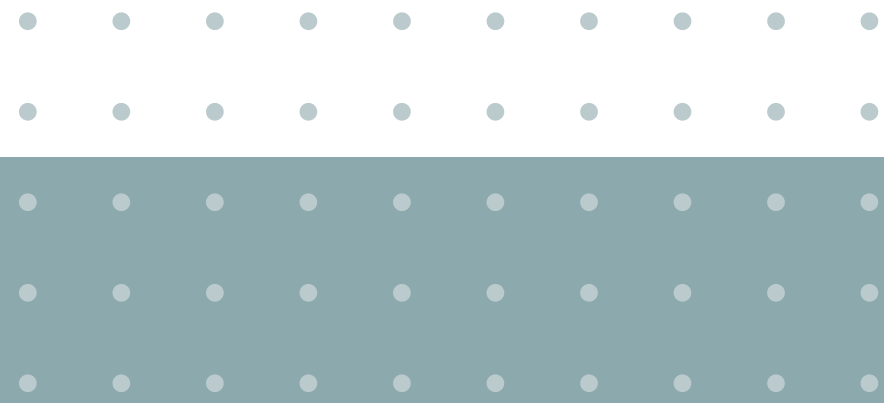


SESSION 2 RESOURCES

Ethan Mollick, "Post-apocalyptic Education: What Comes after the Homework Apocalypse," <https://www.oneusefulthing.org/p/post-apocalyptic-education>

Northwestern University Center for Advancing Safety of Machine Intelligence,
"AI is Everywhere" <https://www.youtube.com/watch?v=jnv9GsmnoE8>





THANK YOU

We will see you tomorrow in Session 3!

languageresourcecenter@northwestern.edu
www.lrc.northwestern.edu

