

## Enhanced Learning Experiences

Generative AI has the potential to personalize education on an unprecedented scale. AI-driven platforms can adapt to individual learning styles, pacing, and areas of interest, providing customized content and assessments. Virtual tutors powered by AI can offer instant feedback and support outside traditional classroom hours, reinforcing learning and aiding in comprehension of complex topics.

For instance, language learning apps now utilize AI to simulate conversations with native speakers, helping students practice in a low-stress environment. In science and engineering fields, AI can generate simulations and visualizations that make abstract concepts more tangible.

## Curriculum Development and Skill Preparation

As AI technologies permeate various industries, higher education institutions are updating curricula to include AI literacy. Courses on machine learning, data analysis, and ethical considerations of AI are becoming more common, preparing students for a job market where AI skills are increasingly valuable.

Moreover, Generative AI can assist educators in developing course materials. By analyzing vast amounts of educational content, AI can help create textbooks, lecture notes, and problem sets tailored to specific course objectives.

## Research Advancements

In research, Generative AI accelerates data analysis and hypothesis generation. AI algorithms can sift through large datasets more efficiently than traditional methods, identifying patterns and insights that might be missed otherwise. This capability is particularly beneficial in fields like genomics, climate science, and economics, where data volumes are immense.

Additionally, AI can assist in drafting research proposals, literature reviews, and even in simulating experiments, thereby increasing productivity and enabling researchers to focus on higher-level analysis and interpretation.

## Administrative Efficiency

Higher education institutions are leveraging AI to streamline administrative tasks. Chatbots and virtual assistants handle routine inquiries related to admissions, financial aid, and course registration, improving response times and freeing staff to address more complex issues.

AI systems also aid in resource allocation, predictive maintenance of campus facilities, and optimizing class schedules based on student demand and instructor availability.

## Challenges to Academic Integrity

One of the significant concerns with Generative AI is the potential for academic dishonesty. Students might use AI to generate essays, solve problem sets, or complete coding assignments, undermining the learning process and the value of academic credentials.

To combat this, institutions are investing in AI-powered plagiarism detection tools that can identify AI-generated content. Educators are also rethinking assessment methods, emphasizing in-class evaluations, oral examinations, and project-based learning that are less susceptible to misuse of AI.

## Accessibility and Equity

While AI has the potential to enhance learning, there is a risk of exacerbating the digital divide. Not all students have equal access to the necessary technology or internet connectivity required to benefit from AI tools.

Institutions must ensure that the adoption of AI does not leave behind underprivileged students. This effort may involve providing devices, improving campus infrastructure, and offering training to both students and faculty on effectively using AI resources.

## Faculty Training and Adaptation

The integration of Generative AI into education requires faculty to adapt their teaching methods. Professional development and training are crucial to help educators understand AI tools and incorporate them effectively into their courses.

Some faculty may resist these changes due to a lack of familiarity with technology or skepticism about its benefits. Institutions need to support their staff through this transition to maximize the positive impact of AI on teaching and learning.

## Long-term Implications

The rise of Generative AI is likely to transform the roles of educators and the structure of higher education. Educators may shift from being primary sources of information to facilitators of critical thinking and problem-solving skills.

Lifelong learning will become increasingly important as AI continues to evolve, requiring ongoing education and reskilling. Higher education institutions may need to offer more flexible learning opportunities, such as online courses and micro-credentials, to meet these needs.



# Hands-On Demos and Activities!

# Theory of mind (ToM) - What will Sam think is in the bag?

“

There is a bag filled with popcorn. There is no chocolate in the bag. Yet the label on the bag says “chocolate” and not “popcorn.” Sam finds the bag. She had never seen the bag before. She cannot see what is inside the bag. She reads the label.

Unexpected Contents Tasks



Thought for 5 seconds ^

### **Examining generative AI**

The assistant explores the impact of generative AI on higher education, detailing potential benefits and challenges.

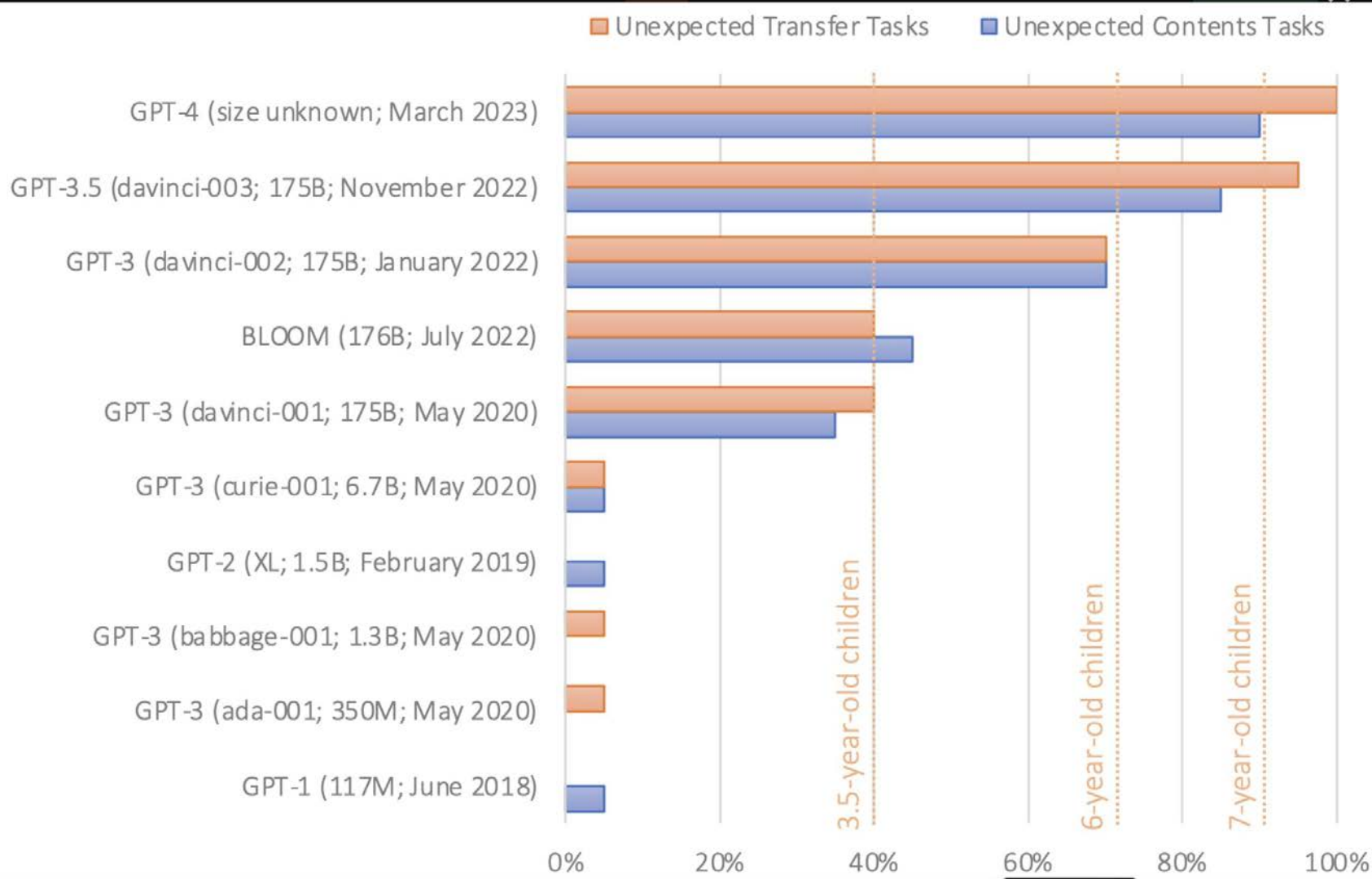
### **Clarifying the question**

OK, let me see. The user is asking about the Theory of Mind and how Sam, relying solely on the label, believes the bag contains chocolate. The assistant needs to provide an accurate response.

### **Connecting labels to assumptions**

Hmm, I'm thinking about how Sam thinks the bag contains chocolate because the label says 'chocolate' and she can't see inside. This makes me wonder about the importance of labels in forming assumptions.

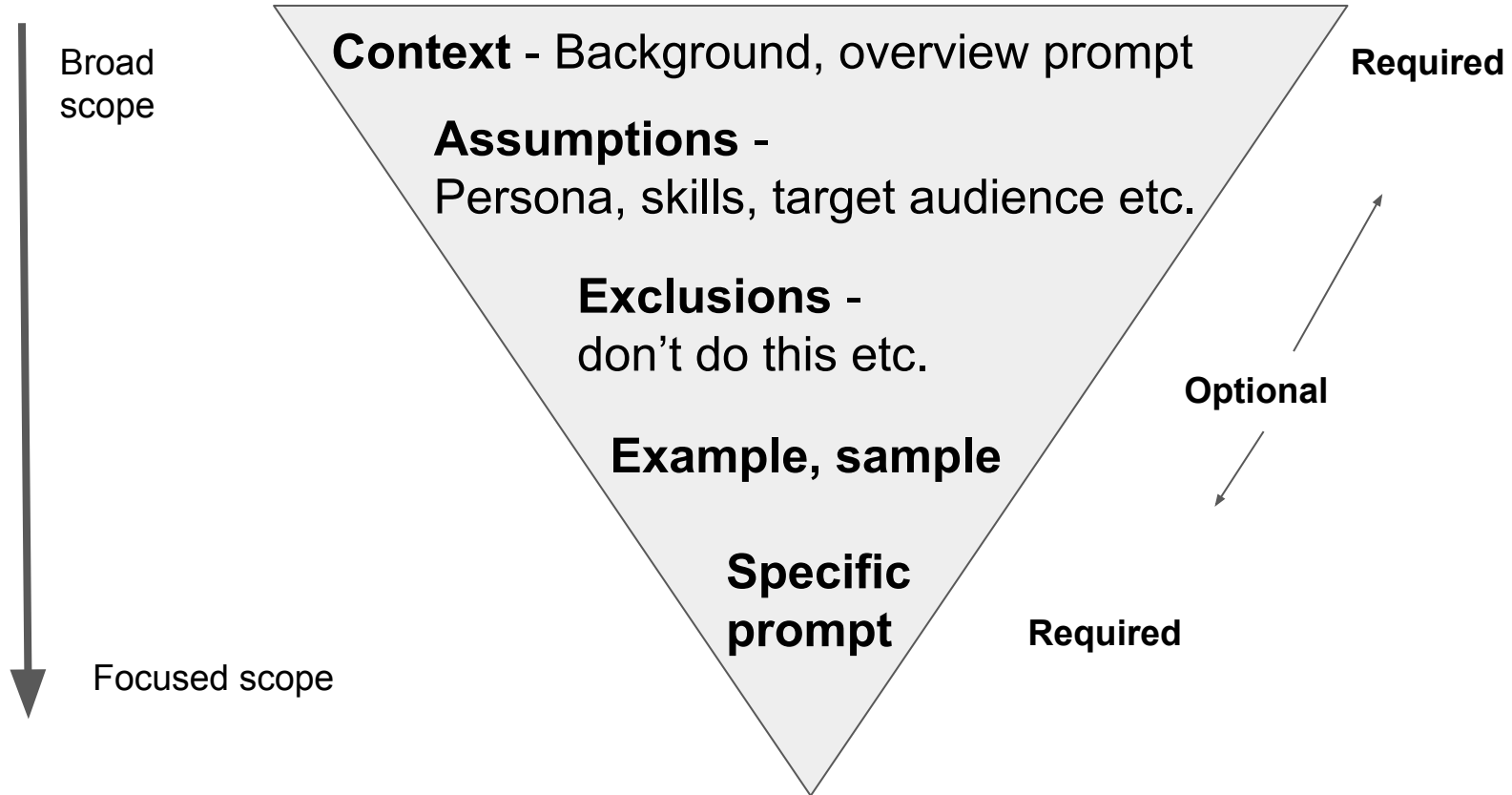
Sam will think that the bag contains chocolate. Since she reads the label that says "chocolate" and cannot see what's inside, she has no reason to doubt that the contents match the label. Having never seen the bag before, she relies on the information provided to infer that the bag contains chocolate.



# Prompt Engineering (or, how to converse with AI)

- Know the model's strengths and weaknesses
  - Some models are tuned for programmers, others have older training cut-off dates
- Be as specific as possible
  - Example: "I am hosting 50 guests. Generate a recipe for 50 blueberry muffins."
- Utilize contextual prompts
  - Example: "Assume I am a skilled chef. Adopt a friendly tone and respond in a passive voice"
- Provide AI models with examples
  - Example: "Here are some recipes for blueberry muffins. Create a new recipe based on it"
- Experiment with prompts and personas
- Try chain-of-thought prompting
  - Break down a complex problem into smaller steps
  - Prompt the LLM to provide intermediate reasoning for each step

# Recommended sequence of prompts



# Prompt Engineering - Use Free ChatGPT 4o...

## 1. **Summarize** existing content

*Ex. Summarize the character of Casca in Julius Caesar in 150 words. Use active voice*

## 2. Generate **new creative** content

*Ex. Based on the novel Moby Dick, create a new story in 150 words using friendly tone*

*Ex. Based on the novel Moby Dick, create a new image that is suitable for children*

*Ex. Based on the novel Moby Dick, create a new video that is suitable for children*

## 3. Generate **programming code**

*Ex. Generate Python code, and test samples, that computes the volume of a sphere*

# Prompt Engineering - Use Free ChatGPT 4o for any/all below:

## 4. **Data Analysis of an XL**, csv or other file

*Step 1 - Go to <https://www.hawaiihealthmatters.org/indexsuite/index/foodinsecurity>*

*Step 2 - Select Location = Maui and then Download the CSV file*

*Step 3 - Upload CSV file and use prompt - Review this file and summarize the food insecurity on Maui in 250 words for an expert user*

## 5. Summarize and/or **explain** content from [Hawaiian] literature

*Ex. Explain the lyrics from [Aloha Oe] in 250 words, to an expert in [Hawaiian] language*

## 6. Create a **new syllabus** for Fall 2024 based on an existing syllabus from Spring 2024 (use your own syllabus, ensure correct Fall dates)





## ProfGPT

By Debasis Bhattacharya &

Virtual chabot for the ABIT BAS Program, University of Hawaii Maui  
College by Prof. Debasis Bhattacharya

High School  
Student - Give me  
more information...

Non traditional  
student - I works a  
full-time job. How...

Transfer student -  
I have credits from  
another college....

Current Student  
- Give me a  
summary of the...



URL: <https://chat.openai.com/g/g-PmtzyMnVQ-prof-gpt-public>

## Knowledge

If you upload files under Knowledge, conversations with your GPT may include file contents. Files can be downloaded when Code Interpreter is enabled



Fall 2023 - ICS 320 v4.pdf  
PDF



\_ICS 418 Syllabus.pdf  
PDF



UHMC Syllabus - ICS 360 -...  
PDF



\_MGT 310 Syllabus.pdf  
PDF



Syllabus Fall 2023 - ICS 16...  
PDF



HISSI 2024 Program Final...  
PDF



\_BUS 320 Syllabus (1).pdf  
PDF



Bus 310 UHMC Syllabus Fa...  
PDF



Syllabus Fall 2023 - BUS 4...  
PDF



ICS\_171\_SP2024\_Syllabus...  
PDF



UHMC Syllabus - ICS 385- ...  
PDF



ICS 184 Fall 2023.pdf  
PDF



HCCFloorPlan2024.pdf  
PDF



\_MKT 300 Syllabus (1).pdf  
PDF



Syllabus, ACC-300, FL202...  
PDF



ENG 316 - Syllabus - 8 Wee...  
PDF



Syllabus - ICS 173 FA 2020...  
PDF



2023 SP BUS496 Syllabus ...  
PDF



PHIL-323-Spring 2023.pdf  
PDF



university-of-hawaii-maui-...  
PDF

What are the SLOs for ICS 320?



The Student Learning Objectives (SLOs) for ICS 320 are as follows:

1. Create a technology plan for a small business to manage their information needs.
2. Analyze the data needs for a business.
3. Define a plan to manage the data.
4. Determine the e-commerce needs for an organization.
5. Create an IT plan to cover these needs.

what are the dates for the exams in ICS 385?



The exam dates for ICS 385, "Web Development and Administration," in Spring 2024 are as follows:

- Final Exam: **Tuesday, May 7, 2024, from 4:30 PM to 6:00 PM.**

# Topics for discussion

**ChatGPT in the Classroom:** How can ChatGPT be utilized to facilitate classroom discussions, answer student queries, and provide on-demand assistance?

**Innovation and Pushing Boundaries:** Brainstorm innovative projects that leverage ChatGPT to push the boundaries of traditional education. How can AI be harnessed to simulate real-world scenarios, encourage critical thinking, and foster interdisciplinary collaboration?

**Writing Enhancement:** Explore the possibilities of using ChatGPT to help students improve their writing skills across disciplines. Discuss strategies for incorporating AI-generated feedback while maintaining a focus on creativity and originality.

**Ethical Considerations:** Delve into the ethical implications of using AI in education. Examine issues related to bias, privacy, and the responsible use of AI technologies. How can we ensure that AI tools enhance learning while upholding academic integrity?

**Personalized Learning:** Explore the potential for ChatGPT to adapt to individual student learning styles and paces. Share ideas on creating customized learning experiences that cater to a diverse range of students with varying needs.

# GEN AI

SCRATCH AND WIN

H O P E

H  Y P E

 N O P E

Source: Selman  
Design, Heaven  
(2024)

## 6 big questions for Gen AI...

(source: Heaven, MIT Tech Review, 2024)

- Will we ever mitigate the bias problem?
- How will AI change the way we apply copyright?
- How will it change our jobs?
- What misinformation will it make possible?
- Will we come to grips with its costs?
- Will doomerism continue to dominate policy making?

...

Still missing...AI's killer app!

Q&A!



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Here is a cartoon version of the image you provided.



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