

Disclosures

Current affiliations. No conflicts of interest to report.

Consultant &/or Service Provider

- Nutrition by Drew, PLLC
- TELUS Health / TELUS Santé
- Microsoft Canada
- MedWorks Canada
- College of Dietitians of Ontario
- The Academy (Foundation, State Affiliates, DPGs & MIGs)

Lecturer

- Buffalo State University
- Hilbert College Global

Volunteer

- Committee for Lifelong Learning, The Academy
- Appeals Panel, CDR



Blueprints for Brilliance: Today's LOs

Utilize an AI tool in order to improve productivity & client satisfaction

Consider A.I.-enhanced teaching strategies & methods in order to engage targeted audiences & develop meaningful content

Discuss ethical implications of A.I. in order to plan for responsible Al integration & use

Recall curriculum considerations in order to help prepare future practitioners for an Al-included profession

Disclaimers

Today's speaker

experience vs expertise

101 info & application

some 101 practice apps, broad & specific

Now vs later

info relevance & applicability

Commercialism

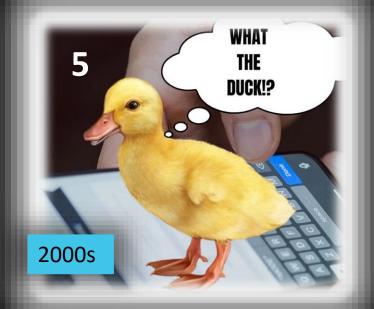
product promotion, ChatGPT use











Artificial Intelligence (AI)¹

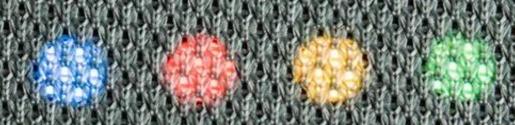
A field of computer & data science focused on creating systems capable of performing tasks that typically require human intelligence.

- understand language
- problem solve

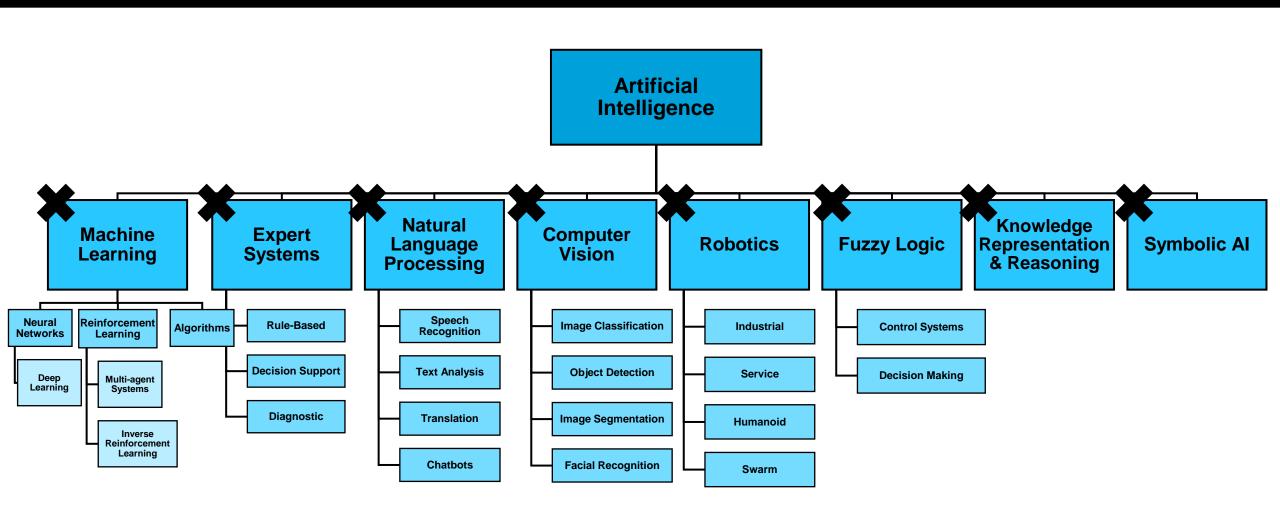
- reason
- adjust

- respond / output
- learn from experience

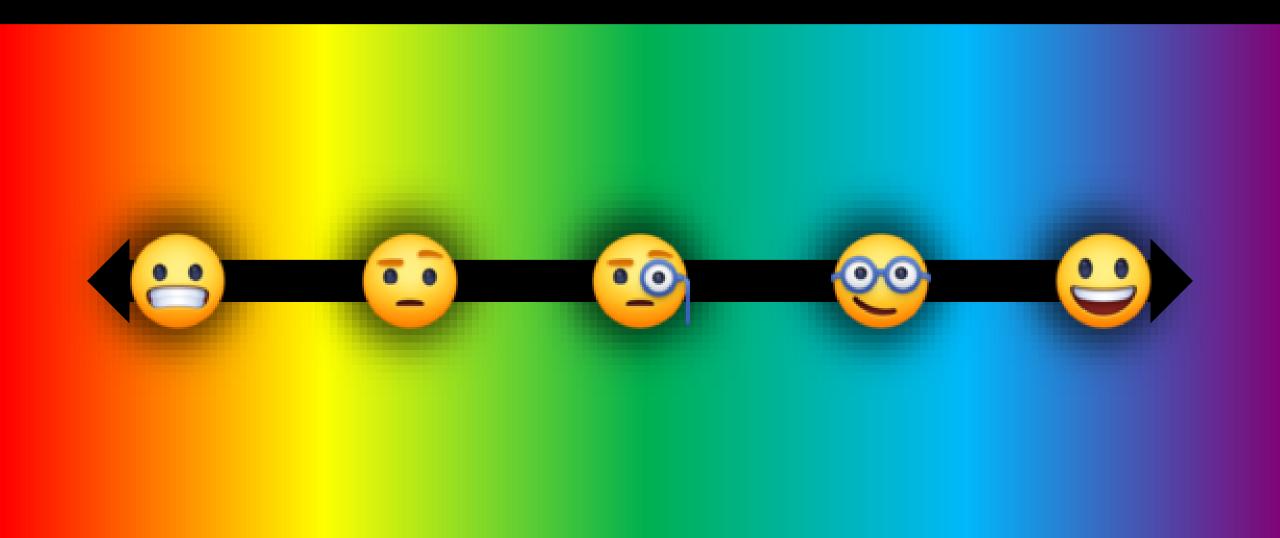
Al encompasses a range of technologies and approaches, including machine learning (ML) & deep learning (DL), natural language processing (NLP), computer vision, robotics & more.



Key Technologies of Al³



A Spectrum of Attitudes About Al 4-6



10 Industries Impacted by A.I. 38,39



Service Automation & Personalization



Finance & ID Fraud Detection



Personalization & Supply Chain Opt.



Autonomous Vehicles & Traffic Flow Opt.



Predictive Maintenance & Quality Control



Content Automation & Personalization



Adaptive LMS & Auto Admin



Crop Health Monitoring & Precision Ag



Enhanced
Surveillance &
Threat Detection



Diagnostic Accuracy & Patient Care

Applications in Food, Nutrition & Health/care

Clinical assessment & diagnosis assistance^{7,8}

Nutrition care plan development⁹

Disease risk & health outcome predictions^{10,11}

Social media data analytics¹²

Wearable devices & smartphone apps¹³⁻¹⁵

Chatbots^{16,17}

CBR & CDS – DM care¹⁸

Policy & climate impact on food security & waste¹⁹

Food safety, quality & inventory²⁰

GenAl: Everyone's Assistant & Second Brain

Quick second opinion

Communications & collaboration

✓ Education, planning & guidance

✓ Article summarization & analysis

✓ Copy writing, editing & translation

✓ Text-to-image & -video

Business strategy

Research & development

Becoming a Pro at Developing Prompts

GPT Prom

Task

context

inclusions

response

Get What Ya Give 21

Considerations for Developing a Successful GenAl Chatbot Prompt

- 1. Provide context: This involves giving background information or details relevant to the prompt. For Provide context: This involves giving background information or details relevant to the prompt. For example, if you're asking for advice on meal planning for a specific population, providing context about
- 2. Assign a role: This is where you specify the role you want ChatGPT to take. For example, you might want Assign a role: This is where you specify the role you want ChatGPT to take. For example, you might want ChatGPT to act as a nutrition educator, a recipe developer, or a research assistant. This helps guide the
- 3. Use keywords: Keywords are important terms related to your query that help ChatGPT understand the Use keywords: Keywords are important terms related to your query that help unation I understand the main focus of your request. For example, in a prompt about diets, keywords might include "heart-healthy,"
- 4. Clarify inclusions: This involves specifying what information or elements you want included in the Clarify inclusions: This involves specifying what information or elements you want included in the response. For example, if you're asking for a meal plan, you might clarify that you want it to include
- 5. Request sources of where information came from that was used to develop the output/response: Request sources of where information came from that was used to develop the output/esponse.

 This involves asking ChatGPT to cite the sources or provide references for the information used in its response. This is important for verifying the accuracy and reliability of the information.
- 6. Specify the desired response such as language/tone use, format, and length: This component allows Specify the desired response such as language/tone use, format, and length: This component an you to tailor the output to your needs. For example, you might specify that you want a response in a
- 7. Be complete & specific: This means providing all the necessary details to ensure a comprehensive and precise response. For example, if you're asking for recommendations on dietary supplements, being precise response, For example, if you're asking for recommendations on dietary supplements, being specific about the target population, health goals, and any contraindications helps generate a more Below are important parts of the process of working with GenAl, like a chatbot.

outcome each time. Iterate by adjusting your prompts based on the responses you receive, continually refining your approach to get more accurate or relevant results.

Make small adjustments to improve the quality of prompt and output. Refining your prompts might involve tweaking the wording, adding more specific details, or clarifying your request to ensure that the responses better meet your needs

Modified from https://aptbot.to/master-chatgot-promoting-techniques-guider & in collaboration was Chi-

Teach the Al model to understand and respond to a wide range of inputs. Providing feedback on responses or using specific prompts that guide the AI to give the kind of answers you're

looking for.

Experiment

Try out different approaches to see what works best. Testing various prompt structures, exploring different topics, or experimenting with how you phrase your tasks or questions to discover the resulting responses/ output you want or need.

Question

direct

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open vs closed

xperiment

Primary GPT Task Prompt Structure 22

- Role
- Context
- Inclusions
- Keywords

Response

As a <u>nutrition expert</u> looking to attract more clients,

I need effective lead generation strategies for my nutrition business.

Provide a list of strategies and examples for social media marketing, networking, and creating engaging content. Focus on search engine optimization.

The language used in the marketing and promotional copy should be engaging and persuasive.

Improving Productivity & Client Satisfaction

Time to Vote!

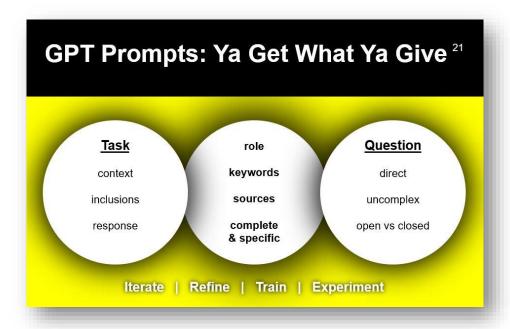
Personalising a meal plan & recipes in context of:

1. Limited foods at home

2. Diabetes management

Prompt!

Personalising a meal plan & recipes in context of **limited foods at home**:



I have a client who has **limited foods at home** but needs to **make them last for herself and her child for the next 3 days**. Consider that **only an electric stove and oven** is available for heating/cooking/baking.

Act as an **expert meal planner** and create a **3-day meal plan** with **simple recipes** for **breakfast, lunch, and dinner using the following ingredients**: 1kg flour, unlimited water, 1 loaf of bread, 1 litre of canola oil, 10 eggs, 2 cans of black beans, 2 cans of tuna, 4 cans of diced carrots, 1 can of corn, 300 grams of chicken, 1 litre of milk, 1 lime, salt, pepper, cumin, garlic powder, 2 medium white onions, 6 apples, 200 grams of guava paste, 1kg of white potatoes, 1 litre of mango juice, and 1 large bag of frozen peas.

Please ensure the meals provide adequate calories and protein for a 30-year-old female and 6-year-old boy

Provide protein, fat, and carbohydrate **nutrition information for each prepared food item**, as well as for the **suggested adult & child serving sizes**. Include **where you retrieved nutrition information from**. Provide the meal plan, recipes, preparation instructions, and nutrition information **all in an organized table format**.

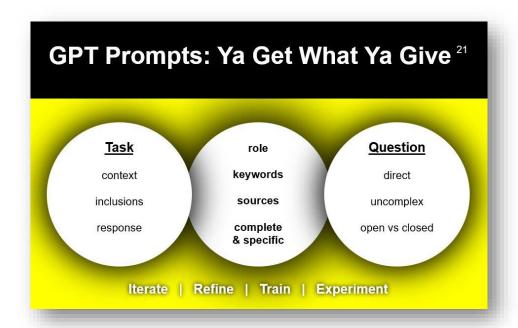
Recipes and Preparation Instructions:

- Scrambled Eggs with Toast: Beat eggs with salt and pepper. Cook in a non-stick pan with a little
 oil until set. Serve with toasted bread.
- Tuna Salad with Bread: Mix canned tuna with diced onions, lime juice, salt, and pepper. Serve on bread.
- Black Bean and Carrot Soup: Blend canned black beans and canned carrots with water to desired consistency. Season with cumin, garlic powder, salt, and pepper. Heat until warm.
- 4. Guava Paste on Toast: Spread guava paste on toasted bread.
- Chicken and Pea Stir-Fry: Dice chicken and cook in a pan with oil until browned. Add frozen peas, diced onions, and season with salt and pepper. Cook until peas are heated through.
- Potato and Onion Bake: Slice potatoes and onions thinly. Layer in a baking dish, drizzle with oil, and season with salt and pepper. Bake at 200°C until potatoes are tender.
- 7. Milk and Apple Porridge: Dice apple and cook in a pot with milk until soft. Serve warm.
- 8. **Tuna and Carrot Patties:** Mash canned tuna and canned carrots together. Form into patties and fry in a pan with oil until golden on both sides.
- 9. Black Bean and Corn Salad: Mix canned black beans, canned corn, diced onions, lime juice, salt



Prompt!

Personalising a meal plan, recipes, & grocery list in context of diabetes management:



As a **nutrition expert specializing in diabetes management**, create a **5-day meal plan** for a **single adult male with type 2 diabetes**, focusing on providing **consistent protein and carbohydrate intake** throughout all 3 meals and 2 snack periods each day. The individual is **lactose intolerant and does not eat seafood**. The **target protein intake** is 25g per meal and 10g per snack, and the **target carbohydrate intake** is 60g per meal and 30g per snack.

For each day, provide: **Breakfast, Lunch, Dinner, and Two Snack Options**. Include **simple recipes** for each meal and snack. Include **preparation instructions and nutrition information** for each prepared food item and **suggested adult serving sizes**, including **protein, fat, and carbohydrate content for each serving**. Provide a **Grocery Shopping List** with needed items **organized by store sections** (produce, meat, bakery, frozen, canned & boxed foods). Please ensure that the meal plan is **balanced, varied & suitable for managing diabetes**.

Use **reliable sources for nutrition information & cite them accordingly**. Provide the meal plan, serving sizes, and nutrition information in **one table**, the recipes in **another table**, and the grocery list in **a third table**. **Exclude any ingredients or products** that contain lactose & seafood.

5-Day Recipes and Preparation Instructions

Grocery Shopping List

Section	Items		
Produce	Spinach, mixed greens, broccoli, apples, bananas, avocados, asparagus, carrots, mixed vegetables, sweet potatoes, green beans, oranges, berries, cherry tomatoes, romaine lettuce		
Meat	Chicken breast, beef, pork chop, turkey breast, ground turkey, salmon fillet		
Bakery	Whole wheat bread, whole wheat tortillas, whole wheat croutons, rice cakes		
Dairy	Lactose-free Greek yogurt, lactose-free cottage cheese		
Pantry	Almond butter, balsamic vinaigrette, soy sauce, garlic, brown rice, quinoa, hummus, peanut butter, whole wheat pasta, tomato sauce, granola, protein powder, honey, almonds, dried apricots, whole wheat pasta		
Canned & Boxed Foods	Lentils, broth, canned pineapple chunks		
Frozen	Edamame		

Communications, Marketing & Education

- Recipe & grocery list development
- Resume development
- Campaign, program & topic planning
- Copy, script, image & video generation & personalization
- Considerations: Response quality (accuracy, misinterpretation & bias), Intellectual property (IP)

Copywriting Samples for Social Media Posts:

Post 1:

"Is your child ready for the college dining hall challenge? Our Nourished College Life Program equips them with the skills to make healthier choices. Enroll now for a stress-free start to college life! #CollegeNutrition #HealthyCollegeLife"

Post 2:

"Dorm room cooking made easy! Our program teaches simple, nutritious recipes that fit perfectly into a busy college schedule. Give your child the gift of health this semester. #DormRoomCooking #StudentWellness"

Post 3:

"Concerned about your college student's food budget? Our program covers smart shopping tips and meal planning to stretch those dollars further. Enroll today for peace of mind!
#BudgetFriendlyMeals #CollegeLife"

Video Content Ideas:

Video 1: Introduction to the Program

- * A short overview of the program, highlighting its key features and benefits.
- Include testimonials from past participants or endorsements from educators.

Video 2: Sample Cooking Demonstration

- Showcase a simple, healthy recipe that can be prepared in a dorm room setting.
- Highlight the ease of preparation and the nutritional benefits.

Video 3: Tips for Navigating Campus Dining

- Provide tips on making healthier choices in the college dining hall.
- Include visual examples of balanced meals and portion control.

Key Considerations in Using GenAl for Text Summarisation^{1,4} ChatGPT 4 v

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Jane Guo (she/her) MCN, RD, LD

Thought Leader on AI & Nutrition @aipowerednutrition | Dallas, Texas

You can ask a GPT to find peer-reviewed articles related to X topic(s) or upload identified articles. Then, ask it to create a table with organized columns for, say, "year published," "authors," "title of study," "study design," "sample size," "findings," "strengths," "limitations," etc. It won't be perfect (proofreading & editing likely required) but it is a great starting point. nmarize

illustrate

Output **URL** support

frainability; **Volume & discernability**;

Data format; Data bias & misinterpretation; Privacy & security

Al & Intellectual Property 23

CITING YOUR AI GENERATED CONTENT 24

Format (MLA):

"Description of chat" prompt. Name of AI tool, version of AI tool, Company, Date of chat, URL.

Example:

"Examples of harm reduction initiatives" prompt. ChatGPT, 4.0, OpenAI, 4 Mar. 2023, chat.openai.com/chat.

In-Text Citation Example:

("Examples of harm reduction")

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Currently (Apr 24), Al-generated content is not eligible for U.S. copyright protection.

Engaging Targeted Audiences & Developing Meaningful Content

Time to Vote!

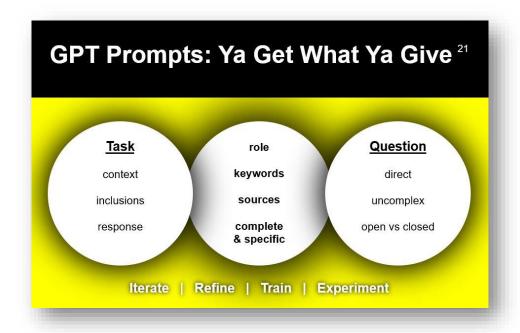
Brainstorm interactive teaching & learning methods for:

1. An in-person workshop on cardiovascular health & nutrition

2. An online nutrition course focused on healthy aging

Prompt!

Eliciting interactive teaching & learning methods for an in-person workshop on cardiovascular health & nutrition:



I'm planning an in-person workshop on cardiovascular health and nutrition for a group of adults aged 40 to 60. I need to develop a workshop that is highly interactive and engaging in order to enhance learning and retention of key concepts.

Act as an instructional designer and brainstorming partner and provide me with creative ideas for interactive teaching and learning strategies for this workshop. How can I incorporate hands-on activities, group discussions, and visual aids to effectively convey the importance of cardiovascular health and nutrition? Please include specific examples of activities and discussion topics that will engage participants and encourage active participation.

ChatGPT

Memory updated

To create an engaging workshop on cardiovascular health and nutrition for adults aged 40 to 60,

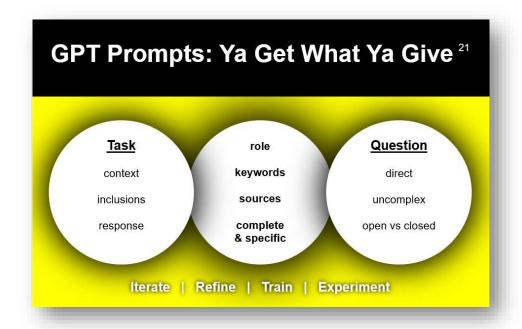
- Role-Playing Scenarios: Create role-playing scenarios where participants act out situations that
 require them to make heart-healthy choices, such as dining out or attending a social gathering.
- Quiz Games: Incorporate quiz games with questions related to cardiovascular health and nutrition. This can make learning fun and reinforce key concepts.
- Visual Aids: Use visual aids such as infographics, charts, and diagrams to illustrate key concepts and make them easier to understand.
- Goal Setting: Guide participants in setting realistic goals for improving their cardiovascular health, such as increasing their daily physical activity or reducing their sodium intake.
- 10. Q&A Sessions: Allocate time for participants to ask questions and seek clarification on topics they find challenging.

to appreciate food. This can help promote healthier eating habits.

 Interactive Discussions: Break participants into small groups to discuss common challenges to maintaining a heart-healthy diet and share strategies for overcoming these challenges.

Prompt!

Eliciting interactive teaching & learning methods for an online nutrition course focused on healthy aging:



I'm developing an online nutrition course focused on healthy aging, targeting adults, ages 40 to 60, who want to improve their health and well-being through their dietary intake. I want to create a comprehensive and engaging course that covers key topics such as nutrient needs, simple meal planning and preparation, and lifestyle strategies for healthy aging.

Act as an instructional designer and brainstorming partner and provide me with ideas for interactive and engaging teaching and learning strategies. How can I make the course interactive and engaging for participants? Please include suggestions for incorporating multimedia elements, self assessments that are fun, hands-on activities that enrollees can complete themselves at home, and discussion forum prompts that provoke critical thinking while applying knowledge they likely have in life already, in order to enhance the learning experience.

Multimedia Elements:

1. Video Lectures: Break down complex topics into short, digestible videos with visuals and

Discussion Forum Prompts:

- Case Studies: Present real-life scenarios related to healthy aging and ask participants to discuss solutions based on course content.
- Debate Topics: Pose controversial topics related to nutrition and aging to stimulate critical thinking and discussion.
- Peer Feedback: Encourage participants to share experiences and offer constructive feedback to their peers' meal plans or lifestyle changes.

Additional Ideas:

- Guest Speakers: Invite guest speakers, such as nutritionists, chefs, or fitness experts, to share their insights and expertise.
- Resource Library: Provide access to articles, videos, and research papers for further reading and exploration.
- Live Q&A Sessions: Host live sessions where participants can ask questions and interact with you and other experts in real-time.
 - 3. Meal Planning Exercises: Guide participar in creating personalized meal plans that meet their nutrient needs and preferences.

Engaging Targeted Audiences & Developing Meaningful Content

Example Prompts for Tailoring Instructional Materials

GPT Prompts: Ya Get What Ya Give 21

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- Taylor Swift-Themed Quiz: Create a quiz that includes questions related to both Taylor Swift trivia and cardiovascular health and nutrition facts. This can add a fun and familiar element to the learning experience.
- Lyric Analysis: Choose Taylor Swift songs with themes of health, vitality, or self-care, and discuss
 the lyrics in relation to cardiovascular health. For example, you could analyze how lyrics about
 self-confidence or empowerment relate to making healthy choices.
- 3. Swiftie Wellness Challenge: Develop a wellness challenge inspired by Taylor Swift's music. For example, participants could earn "Swiftie points" for completing heart-healthy activities like going for a walk or trying a new healthy recipe.
- 4. Create a "Swiftie" Cookbook: Collaborate with participants to create a cookbook featuring heart-healthy recipes inspired by Taylor Swift song titles or lyrics. Each recipe could be paired with a brief explanation of its nutritional benefits.
- Role-Playing as Taylor Swift: Encourage participants to imagine themselves as Taylor Swift and make health-conscious decisions based on her values and lifestyle. This could be done through scenarios or games.
- 6. Music Video Parodies: Have participants create their own music video parodies of Taylor Swift songs, but with lyrics rewritten to promote cardiovascular health and nutrition. This can be a fun way to reinforce key messages.



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- Respectful Messaging: Acknowledge and respect the individual's beliefs in fatalism without dismissing or contradicting them. Use language that is non-judgmental and empathetic.
- Focus on Empowerment: Emphasize actions that individuals can take to improve their health
 within their belief system. Highlight the importance of small, manageable steps that can make a
 difference.
- 3. **Storytelling**: Share stories or testimonials from individuals with similar beliefs who have taken control of their health and made positive changes. This can help inspire and motivate others.
- Interactive Discussions: Encourage open and respectful discussions about fatalism and its
 impact on health behaviors. Provide a safe space for individuals to express their thoughts and
 feelings.
- Incorporate Cultural Elements: If relevant, incorporate cultural beliefs and practices into the
 educational materials. This can help make the information more relatable and meaningful to the
 audience.
- Use of Analogies: Use analogies or metaphors that resonate with fatalistic beliefs to explain health concepts. For example, comparing the body to a machine that requires regular maintenance.
- 7. Highlighting Benefits: Emphasize the benefits of healthy behaviors in a way that aligns with fatalistic beliefs. For example, how eating nutritious foods can improve energy levels and overall well-being.

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Communications, Marketing & Education

(8)

ChatGPT

Social Media Marketing Strategy for "Nourished College Life Program"

1. Platform Focus:



Devin Breedon, MBA, RDN, LD

Dietitian & Consultant Vital Nutrition, LLC | Ocala, Florida

I've used AI within Canva to improve graphics for marketing materials.

Utilizing ChatGPT, I've created social media content, education materials, & have organized new projects that I've begun implementing.

Something requiring hours or an additional person is now possible with Al.

oh targeted ads, groups, and sharing informative

and stories to engage a younger audience.

and organizations involved in higher education

n, dorm room cooking, and budget-friendly

nts or endorsements from educators.

tdown to the program launch date.

about college nutrition and the program.

am or Facebook to answer questions and

s #CollegeNutrition, #HealthyCollegeLife,

m to reach parents of college-bound students

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	Pictory	1 and time
	Otter.ai	Transcribes conversations in real time.
	Rev	Offers transcription and captioning services.
		Transcribes audio and video files.
Caption Automation & Transcription	Happy Scribe	Automatic transcription and translation service.
Hanschpass	Sonix	Transcribes audio and video files into editable text.
	Trint	
	Canva	Design tool with Al-powered features.
Graphic Design	Adobe Spark	Create graphics, web pages, and videos with Al assistance.
	100	Design presentations, infographics, and more with Al.
	Visme	Graphic design tool with Al-powered features.

racy,

Partner with college-focused influencers, nutrition bloggers, and higher education institutions to expand your reach.

A Prediction for Al in Dietetics

RD & DTR Role(s) in the Age of Al

Advanced

Intermediate

Entry

standards 25,26 公 scope

- Specializations
- Research & QI
- Policy & advocacy
- Program development
- Leadership & management
- Education & counseling
- Collaborations

Focus on Al Implications 27,28

Bias

fairness & equity

Explainability

trust & regulation

Accountability & Accuracy

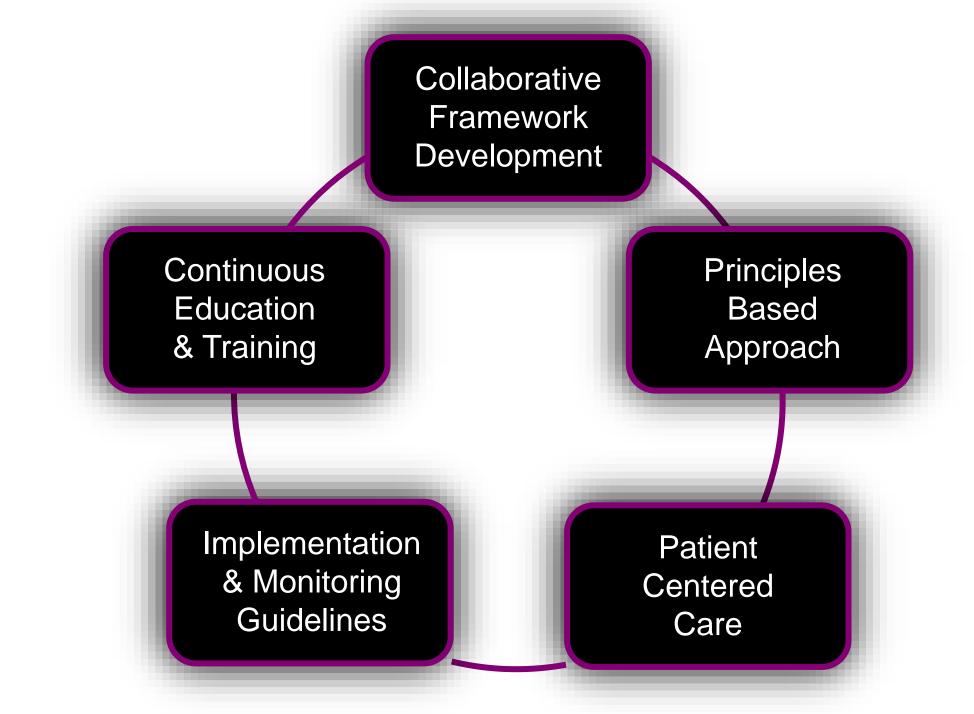
ethics & responsibility

Security

data protection & system integrity

Transparency

trust & informed consent



Planning for Responsible Al Integration & Use

Time to Plan!

Framework | Output Quality | Transparency & Accountability

Building a Collaborative Framework

IT Department Data
Security
Officer

Practice Manager

Research & Development Team

Legal & Compliance Department

Professional Development Coordinator

Focusing on Output Quality, Transparency & Accountability

Critical Review & Decision Making Authority

Data Training

Stakeholder Communications

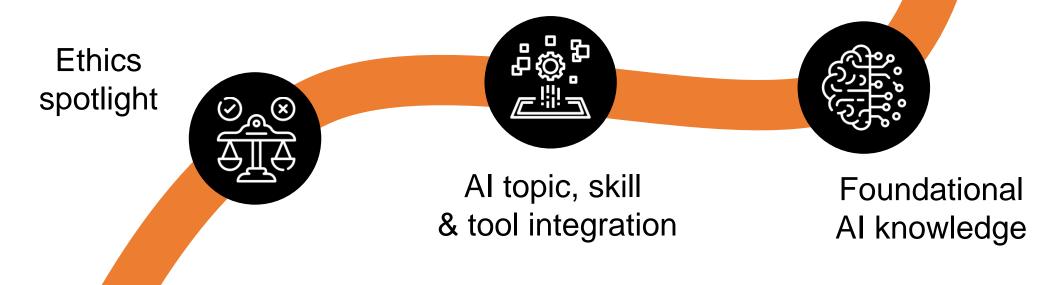
Consent,
Disclosures &
Documentation

Feedback Loop,
Monitor &
Evaluate

Continuing Education

Helping Prepare Future Practitioners for an Al Included Profession

Curves in Curriculum 33,34





Professional development & continuing education

Leveraging AI in Higher Education 35-37

LMS Data Analytics

At-risk students | Personalized learning paths | Content enhancement



Naheed Ali-Sayeed PhD, RD, CDN, FAND (she/her)

Program Director, Nutrition & Dietetics D'Youville University | Buffalo, NY

I help guide students in using [GenAl] to support their learning.

I've used it to develop class outlines, lecture notes, and even assignments.

We're piloting a chatbase to answer student questions about course content.

Generative AI is all about the quality of your prompts. ""



Communicate AI Limitations & Implications

- "GPT Prompts: Ya Get What Ya Give"
- Known to produce inaccurate, outdated, biased output
- Lack of highly personalized and intricate psychological
 & emotional support in context of health care
- Expert validation, collaboration & systems are needed during implementation & use
- Potential impact on critical thinking



@askyourdigitalagency (IG) Hamna Aslam Kahn (in) Dirk Zee (in) Zain Kahn (in) ChatGPT Ideas, Tips & Tricks (Fb Group)

@aipowerednutrition (TT & Fb Group)

Questions?

in Drew Hemler

nutritionbydrew@gmail.com hemlerdm@buffalostate.edu drew.hemler@vc.telushealth.com

The Minds Behind the Slides: References

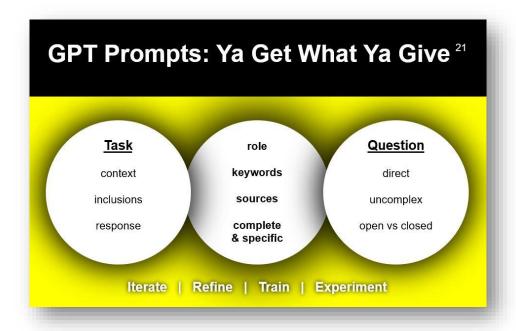
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Improving Communications

Example Prompts for Communication Conundrums

Prompt!

A communication conundrum in context of client communications:



I'm working with a client who is resistant to making the dietary changes I've recommended for managing their cardiovascular disease. They live alone, have family but don't have a good relationship with them, and are concerned about dietary changes, fearing they won't enjoy the foods that can help in managing cardiovascular disease. They like to go for walks and have a few friends they are close with.

Act as a **communication expert** and provide me with **strategies to effectively communicate** the importance of these dietary changes to my client. How can I **motivate them to embrace these changes and overcome their resistance**?

Please ask me questions about the individual's lived experience (focusing on motivating determinants of behavior change). After I answer the questions you provide, include examples of language or phrases I can use to positively reinforce the benefits of a healthier diet and address any concerns or misconceptions they may have. Additionally, provide strategies to connect with their values and goals to help them see the importance of dietary changes.

Prompt!

A communication conundrum in context of **professional collaborations**:



I'm collaborating with a healthcare professional from another discipline who consistently oversteps professional boundaries when it comes to providing dietary advice to our shared patients. This has led to confusion and conflicting recommendations for our patients.

Act as a **communication expert** and provide me with **strategies to address this issue** with my colleague. **How can I assert my role as the dietitian and communicate the importance of respecting professional boundaries without causing tension or conflict?** Please include **examples of language or phrases I can use** to assert my expertise and reinforce the need for clear communication and collaboration.