Making Connections, Making a Difference

Making Connections 2024

The National Transit Workforce Conference

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TWC TRANSIT WORKFORCE CENTER

Artificial Intelligence in Training Development

Integrating AI into Design and Development

Making Connections 2024 TWC

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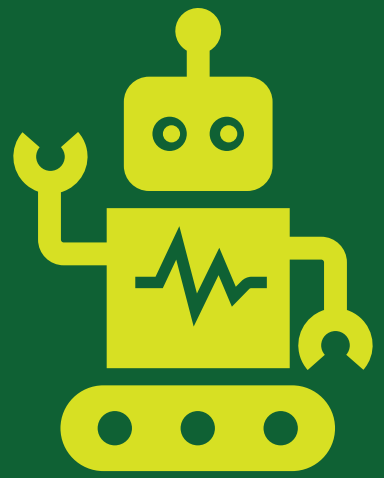
Defining Artificial Intelligence

WHAT IS AI?



AI is a technology that works in some ways like the human brain to perform tasks and solve problems.

Applications of AI

Finding Solutions

(Google Maps finds the quickest route)

Understanding Data

(Netflix suggests shows based on watch history)

Understanding Language

(Siri responds to your requests)

Spotting Patterns

(Banks detect fake transactions)

Learning from Actions

(Online ads based on browsing history)

AI: Not a Recent Innovation

Spell Checkers

Suggest corrections to improve writing.

Spam Filters

Identify and block unwanted emails.

Voice Recognition

Early phone systems enabled voice commands.

Ethical Issues Associated with AI

WHAT PROBLEMS CAN AI POSE?

AI can pose ethical risks, such as making biased decisions or invading privacy, if not properly controlled.

Ethical Issues Associated with AI

Privacy

AI can misuse personal data.

Bias

AI learns from past data.

Control

As AI gets smarter, it can make decisions without humans.

Copyright

AI uses copyrighted materials, raising concerns about copyright law.

Why Use AI in Training and Development?

Saves Time

AI handles repetitive tasks.

Engages Learners

AI personalizes content to fit each learner's style.

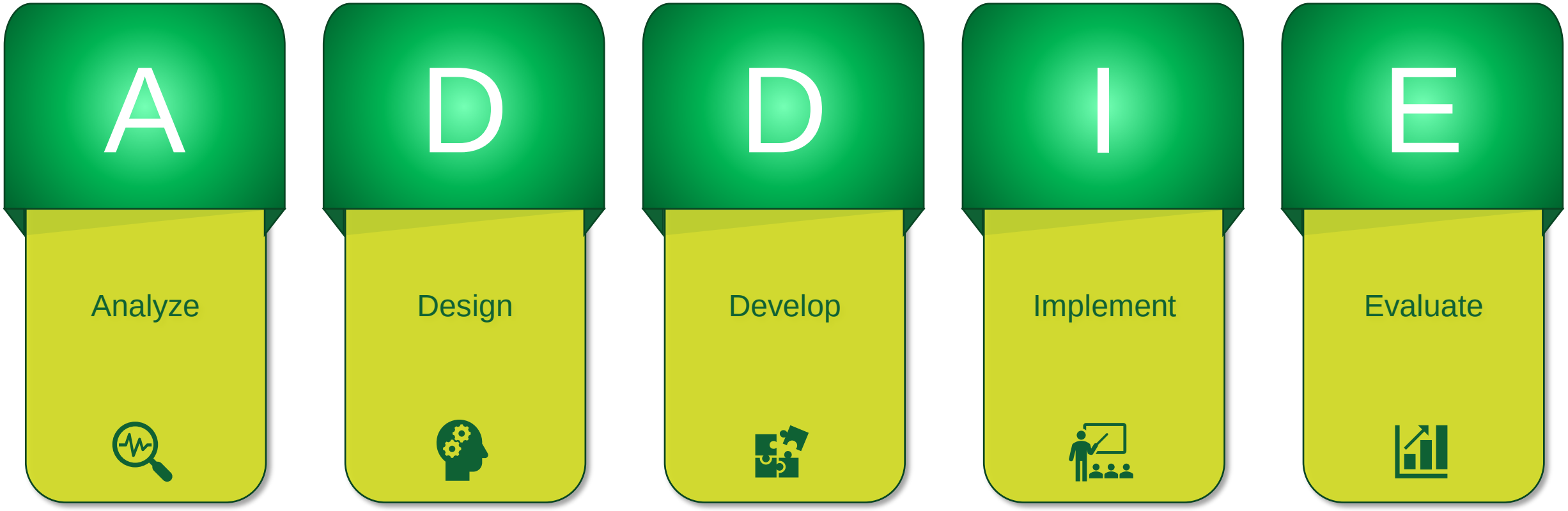
Tracks Progress

AI tracks how well students are doing.

Updates Content

AI keeps training resources current.

ADDIE Instructional Design Framework



AI Tools for ADDIE Integration

ChatGPT

Develops knowledge checks and surveys.

Clearly Reader

Summarizes content for efficient research.

munch

Provides multilingual content support.

descript

Edits videos and adds captions.

Canva

Designs visuals for engaging materials.

Jasper

Generates written content for learning materials.

DeepAI

Adds AI voiceovers to video content.

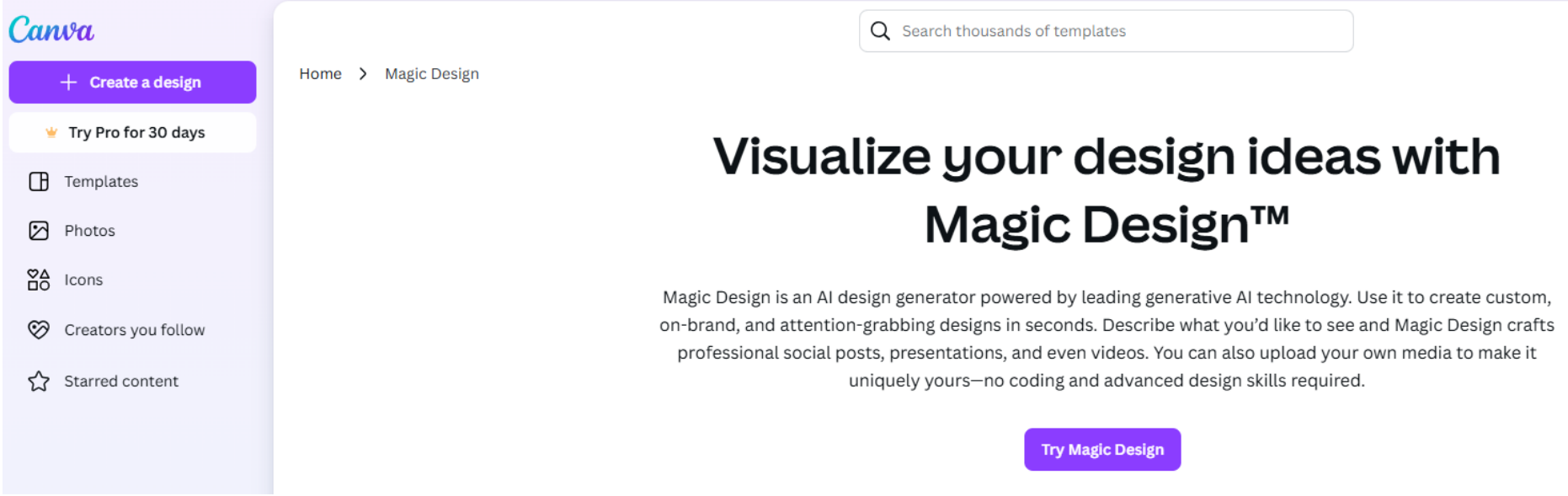
Kahoot!

Creates interactive quizzes for feedback.

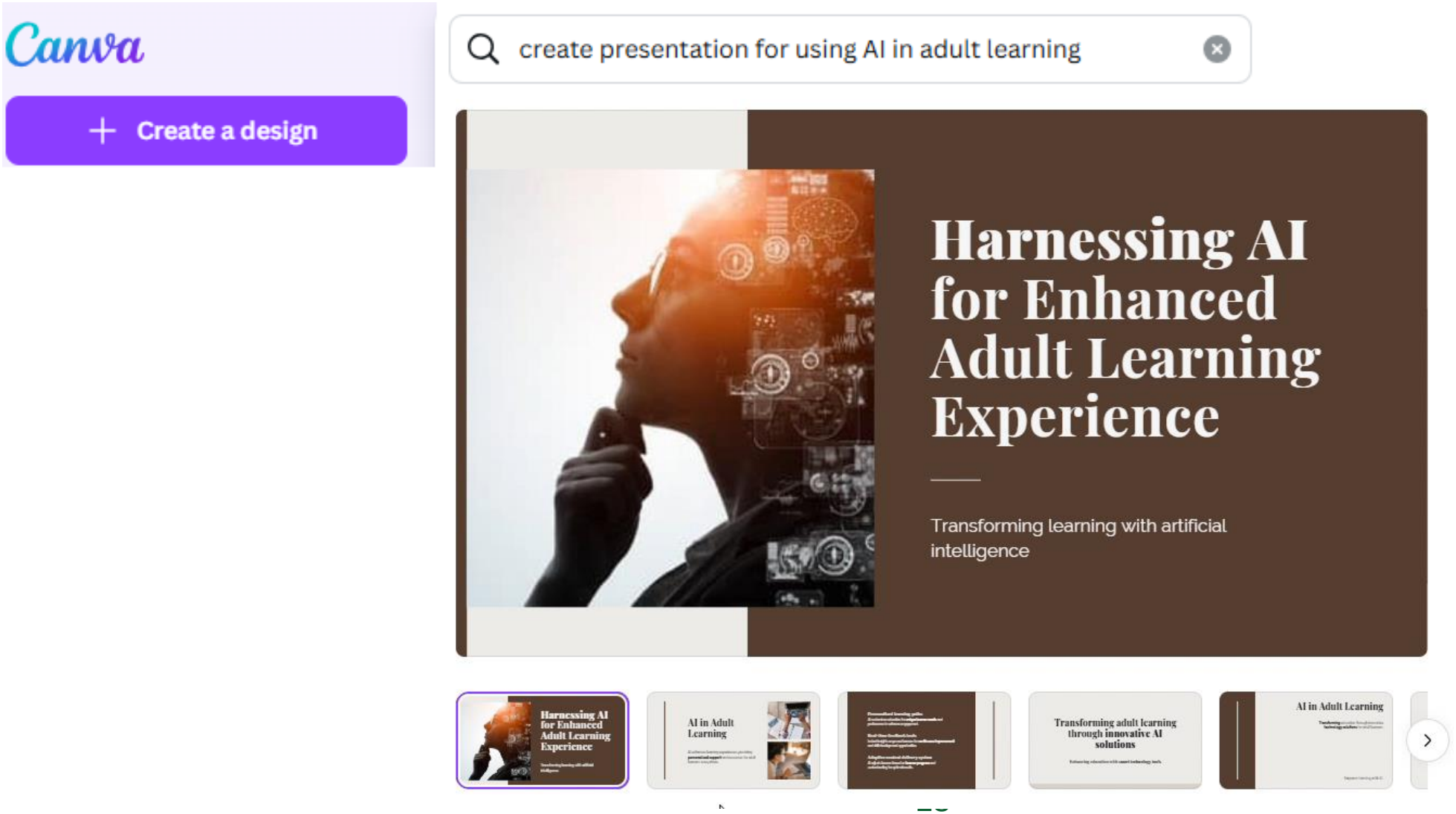
AI Tool for Graphic Design: CANVA

A Solution for Non-Graphic Designers

Allows anyone to create visuals easily.



AI Tool for Graphic Design: CANVA



LEVERAGING CHATGPT FOR PROFESSIONAL DEVELOPMENT AND TRAINING

How AI supports learning, training design, and curriculum development

Jeff Pratt
Manager of Training - Maintenance of Way
Bi-State Development | Metro Transit

What is ChatGPT?

Definition: An AI assistant that uses natural language processing to generate conversational and structured responses.

Capabilities: Information retrieval, learning assistance, content creation, and strategic planning.

Using ChatGPT for Professional Development

- Learning and Development
- Training program Design
- Curriculum Development

Benefits of Using ChatGPT for Professional Development

- On-demand expertise for complex questions
- Time-saving for creating materials quickly
- Adaptable and Versatile support
- Increased engagement with customized content

Programing AI Effectively

- **Clear, specific prompts:** Use direct language when typing a prompt into ChatGPT. Any ambiguity could result in a response that isn't effective. Ex: Create a lesson plan on basic railroad signaling.
- **Complex requests in steps:** For a complex request, break your prompt into parts. Ex: Create objectives for an HVACR recovery course that contains the following topics: gauges, recovery equipment, vapor recovery, push-pull recovery and recovery machines.
- **Follow-up questions:** Ask follow up questions to refine ChatGPT's response and to get a more accurate response.

Example prompts:

- Explain the basics of [topic]
- Suggest practical exercises for [skill]

ChatGPT Prompt Quick Reference Guide

General Prompting Techniques

Technique	Description
Be specific	Clearly define your query to get precise answers or information
Use clear language	Avoid ambiguity and use straightforward language to reduce confusion
Ask one thing at a time	Keep your prompt focused on one topic or question for clarity
Provide content	Give background information to help guide the AI's response
Use lists or bullets	Organize information or questions into lists for structured responses
Set a goal	State the intended purpose to help guide the response more accurately
Experiment with length	Vary prompt length to explore different levels of detail in responses

ChatGPT Prompt Quick Reference Guide

Creative Writing Techniques

Technique	Description
Describe the scene	Provide detailed visual elements to help the AI set the atmosphere.
Define characters	Specify names, personalities, or backgrounds for characters.
Suggest a plot twist	Ask for unexpected events or twists to add complexity to stories.
Set the tone	Indicate a mood or tone (e.g., suspenseful, humorous) for more tailored results.
Establish a genre	Mention the genre (e.g., sci-fi, mystery) to direct the response's style.
Prompt dialogue	Request a conversation between characters for dynamic interactions.
Ask for backstory	Have the AI build character histories or world lore.

ChatGPT Prompt Quick Reference Guide

Information Gathering Techniques

Technique	Description
Ask for definitions	Request clear definitions for technical terms or unfamiliar concepts
Request comparisons	Ask to compare and contrast concepts or items for better understanding.
Summarize complex topics	Request a summary of detailed or lengthy information
Specify a time frame	Ask for information relevant to a specific historical period or date.
Request pros and cons	Ask for advantages and disadvantages of an idea or solution.
Ask for step-by-step guides	Request instructions or procedures broken down into steps.
Inquire about sources	Ask for external references or citation guidance if applicable

ChatGPT Prompt Quick Reference Guide

Improving Writing and Grammar Techniques

Technique	Description
Request rewording	Ask the AI to rephrase sentences for clarity or tone improvement.
Check for grammatical errors	Request a grammar or spelling check for text refinement.
Improve conciseness	Ask the AI to make your writing more concise and direct.
Adjust tone	Specify the tone (e.g., formal, friendly) to make the text fit the context.
Fix passive voice	Ask for passive voice sentences to be rewritten in active voice
Request synonyms	Ask for synonyms or alternative words to enrich vocabulary
Ask for punctuation advice	Request suggestions on improving or correcting punctuation usage

ChatGPT Prompt Quick Reference Guide

Brainstorming and Idea Generation Techniques

Technique	Description
Request a brainstorm	Ask for multiple ideas or suggestions on a specific topic.
Suggest alternatives	Ask for alternative approaches or solutions to a problem
Explore different angles	Request opinions or thoughts from various perspectives
Ask for pros/cons of ideas	Evaluate the strengths and weaknesses of potential ideas.
Provide constraints	Set limitations or boundaries to help refine ideas.
Prompt a “what if” scenario	Use hypothetical scenarios to spark creative thinking.
Request variations	Ask for different variations on a central theme or concept

ChatGPT Prompt Quick Reference Guide

Task Management and Productivity Techniques

Technique	Description
Ask for time estimates	Request time estimates for completing tasks or projects.
Break down large tasks	Ask to split complex projects into smaller, manageable steps.
Set priorities	Ask for help prioritizing tasks based on importance or deadlines
Create to-do lists	Request a structured to-do list for daily or long-term tasks.
Ask for progressive tracking	Request tips or tools to track project progress.
Request motivation tips	Ask for advice or techniques to stay focused and motivated.
Schedule task reminders	Ask for a reminder plan to stay on track with deadlines.

ChatGPT Prompt Quick Reference Guide

Teaching and Learning Assistance Techniques

Technique	Description
Request explanations	Ask for in-depth explanations of complex subjects.
Ask for examples	Request real-world or hypothetical examples for better understanding.
Create quizzes	Ask for quiz questions on a specific subject to test knowledge.
Ask for study tips	Request techniques for improving study habits and learning efficiency.
Request learning plans	Ask for a step-by-step learning guide on a new topic or skill.
Summarize key points	Request a summary of essential concepts after learning a new subject.
Use analogies	Ask for comparisons or analogies to simplify difficult ideas.

Prompt Examples

Hello ChatGPT, "Could you formulate a set of questions suitable for a post-training assessment related to our recent program on [specific training topic]? Use this for reference [information on the program and desired outcomes].“

ChatGPT, you are an instructional designer. Your task is to create a detailed training program plan for new hire Fuel and Oil Attendants that contains the following information: obtaining proper identification, attendance policies, uniform policies, fueling instructions and standard operating procedures, job hazard analysis, and bus mover pre-trip form. Please give learning objectives for each module and consider using hands-on training as well as classroom training.

Uploading Documents for Detailed Responses

ChatGPT also allows users to upload guides, reports, and reference materials, allowing it to offer precise responses based on that content.

Example document: “E-Bus Charger Maintenance Guide ”

Ensure that no safety sensitive information or other sensitive material is uploaded

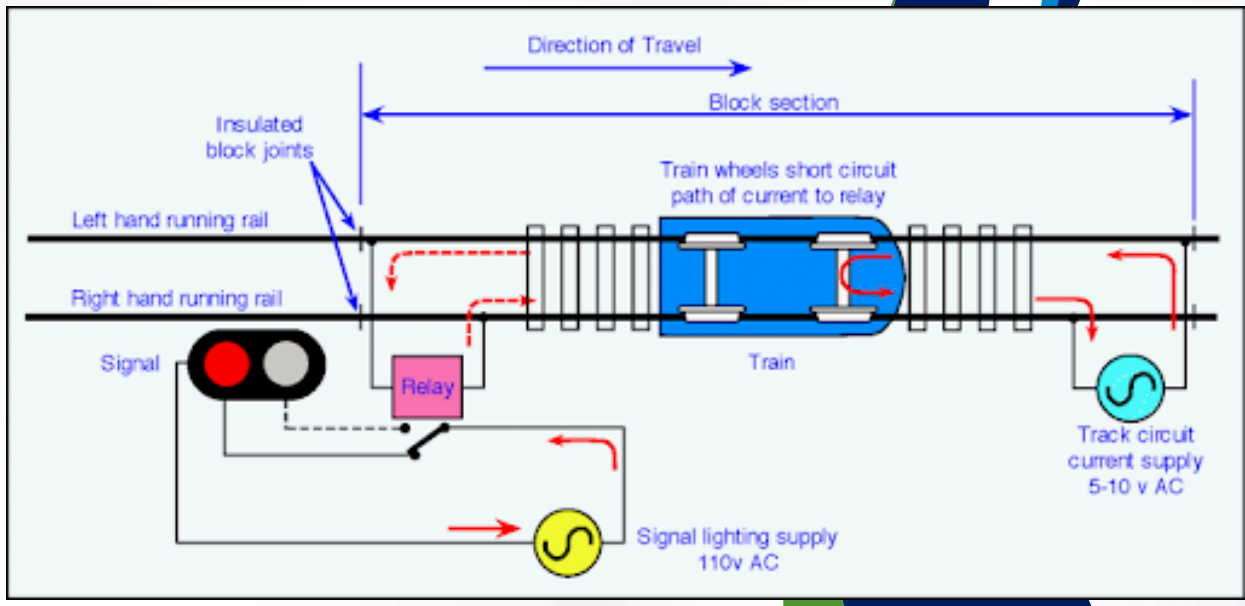
Learning & Development for Railroad Signal Maintenance

ChatGPT also can allow users to gain practical knowledge in railroad signaling.

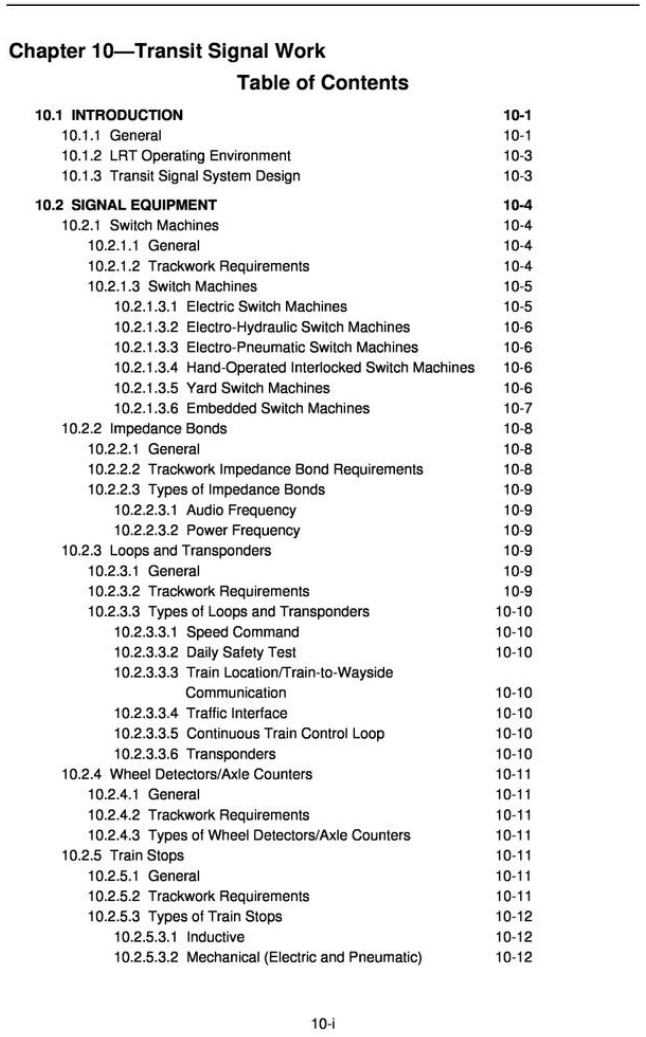
Example prompts:

- Explain the components of railroad signaling.
- What are the essential safety protocols in signal maintenance?

Demo prompt: Suggest hands-on tests for basic signal maintenance skills.



Creating Training Programs with ChatGPT



Chapter 10—Transit Signal Work

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Main objective: Build a 6-week training program on signal maintenance.

Example prompts:

- Outline a six-week course on railroad signaling
- Create a quiz on basic signal concepts

Demo prompt: Develop an interactive activity to teach signal wiring basics.

Training Program Design

ChatGPT can also create a training framework for hands-on skill development.

Example prompts:

- Suggest a training session for learning troubleshooting.
- What challenges do new signal maintainers face?

Demo prompt: Outline a hands-on training activity for equipment calibration.

Demonstration: Using Chat GPT with Precise Prompts:

Let’s take a look at ChatGPT using some precise prompts.

Demo prompts:

- BEB Electric Bus Charging Maintenance Manual

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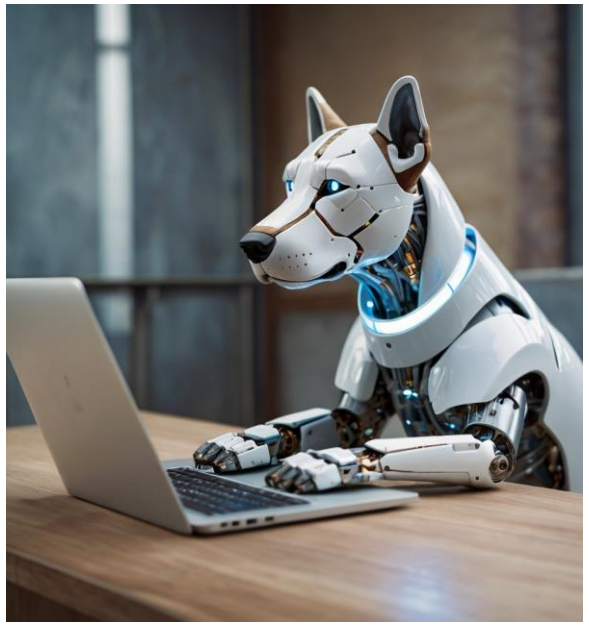
Building Custom AI Tools

Michael Tomlinson
Solution Architect

ENGAGE EDUCATE EMPOWER

Agenda

1. What do we want AI to do?
2. How do we get it to do that?



Question One

What do we want AI to do?

The Approach

Identify a task

Writing

- Outline
- Find content
- Write script
- Curate images

Development

The Results

Parts

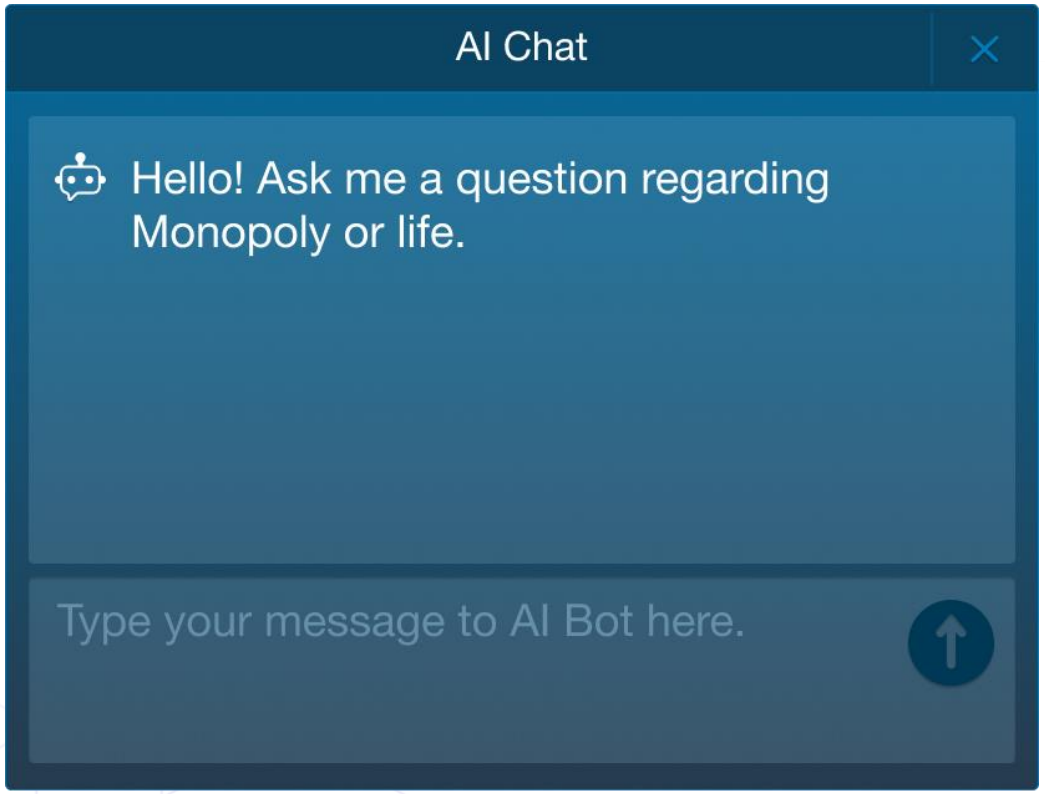
- What are the parts of the board?
- What is the Bank?
- What is a Utility?

Theory of operation

- What is the objective?
- What can I do in a turn?
- Who would make a good banker?

Maintenance tasks

- How do I buy a hotel?
- Can I mortgage my property?



Question Two

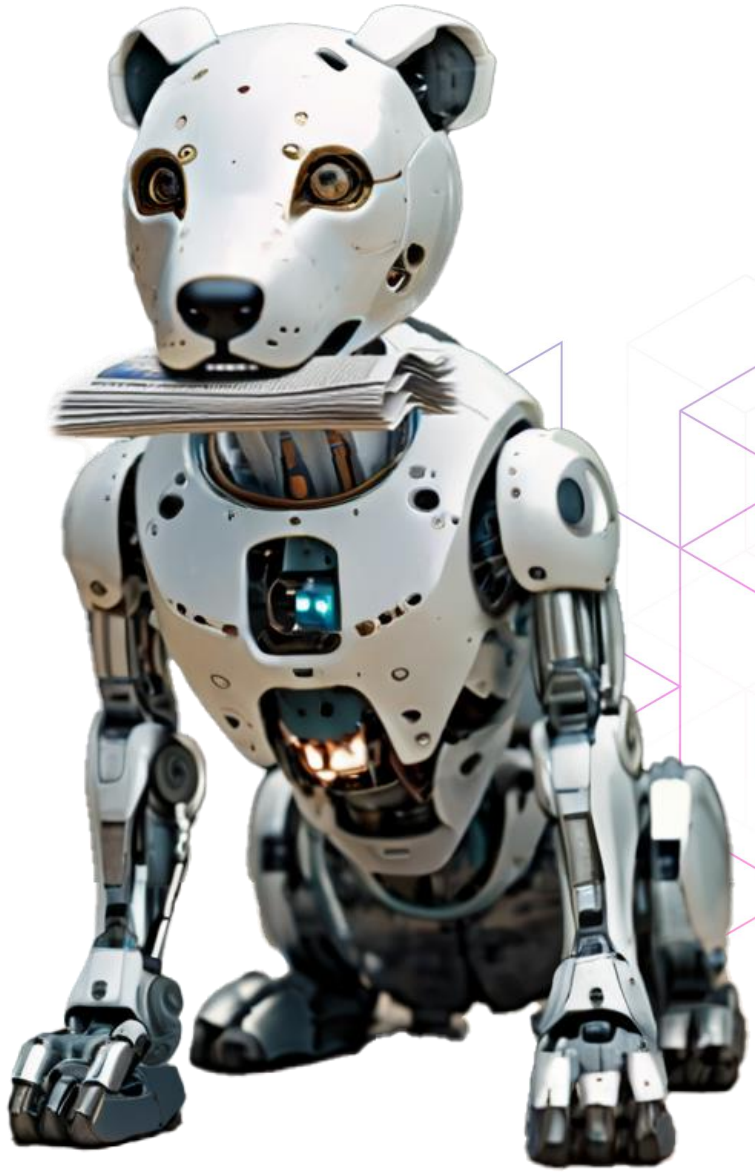
How do you get AI to do what you want?

The Approach

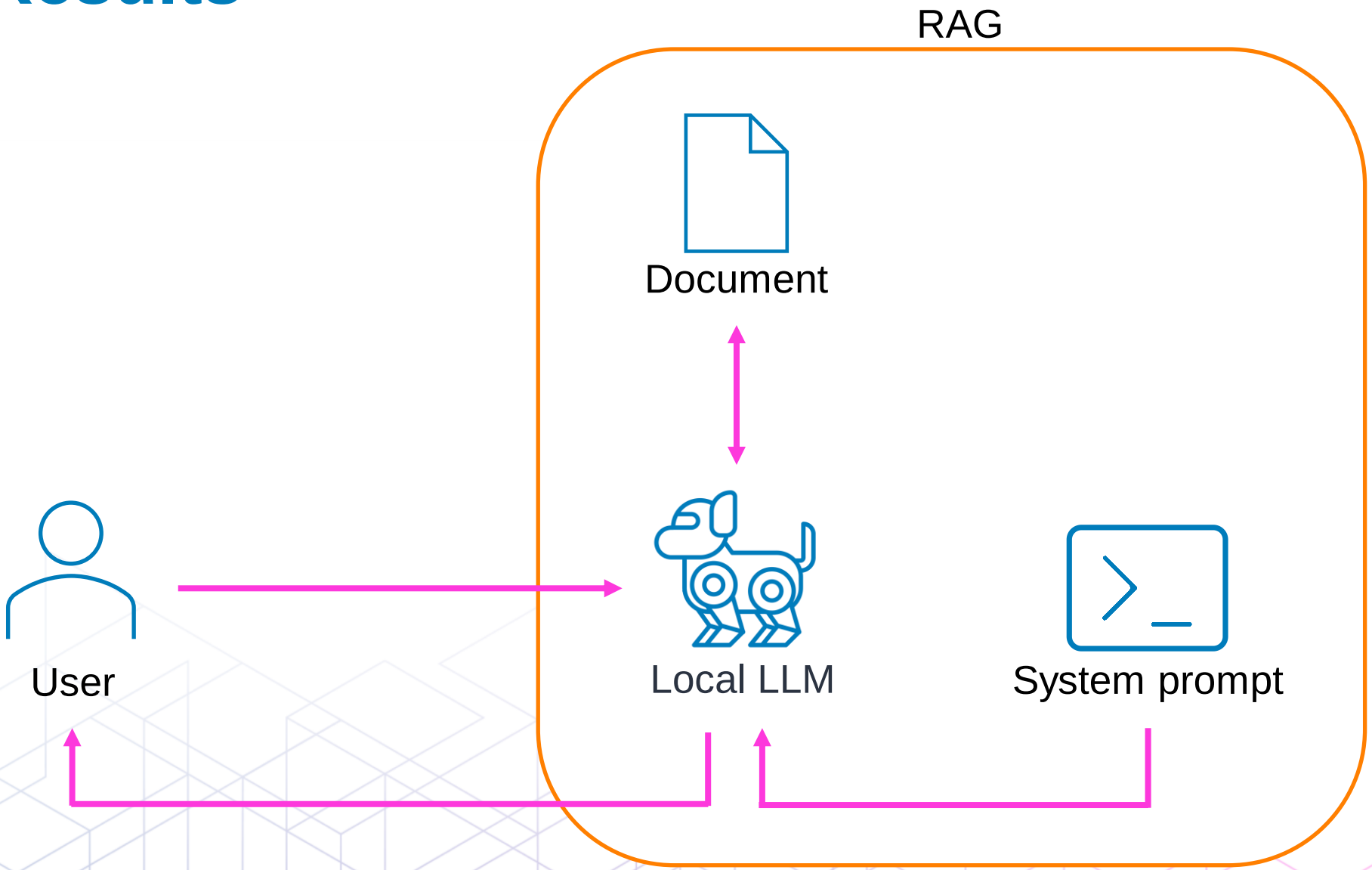
Choose tools and techniques

Considerations

- Model (local/cloud)
- Method (RAG)
- Prompt (system/user)
- Training



The Results



Takeaways

1. **What do we want AI to do?**
   - Identify the tasks
   - Pick one

2. **How do we get it to do that?**
   - Model (local/cloud)
   - Method (RAG)
   - Prompt (system/user)
   - Training

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Thank you

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