



# CRITICAL SKILLS

IN THE AGE OF AI

In collaboration with





WEBINAR PRESENTERS

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# AGENDA

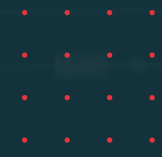
- 1. Learning Journey**
- 2. AI Overview**
- 3. The Critical Skills Framework**
- 4. Uniquely Human Skills**
- 5. Human/AI Collaboration**
- 6. Adaptive and Meta Skills**



## On a scale of 1-10 How would you rate your level of skill in the use of AI?

**1** -You've heard of ChatGPT or similar tools but only experimented once or twice.

**10** -You're an advanced AI user, skilled in prompt engineering, using multiple AI tools daily, and confident in applying your critical and soft skills to get the best results.



# The Learning Journey

## A Visual Path from Curiosity to Excellence



Each phase builds upon the previous, creating a continuous cycle of growth and development



# What is Artificial Intelligence?



# Timeline of AI

1940s-1950s



## Foundations of AI

Birth of AI with the Turing Test and the Dartmouth Conference.

1960s-1970s



## Early Exploration

Early symbolic reasoning and expert systems emerge; limited by computing power.

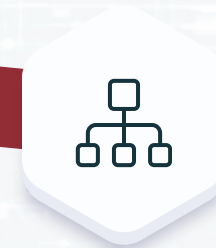
1980s-1990s



## Knowledge Systems & Machine Learning

Rise of machine learning, neural networks, and the first real-world applications (e.g., Deep Blue).

2000s-2010s



## Data & Computing Era

Explosion of data and deep learning; breakthroughs in image and speech recognition, and AlphaGo's victory showcase AI's potential.

Present

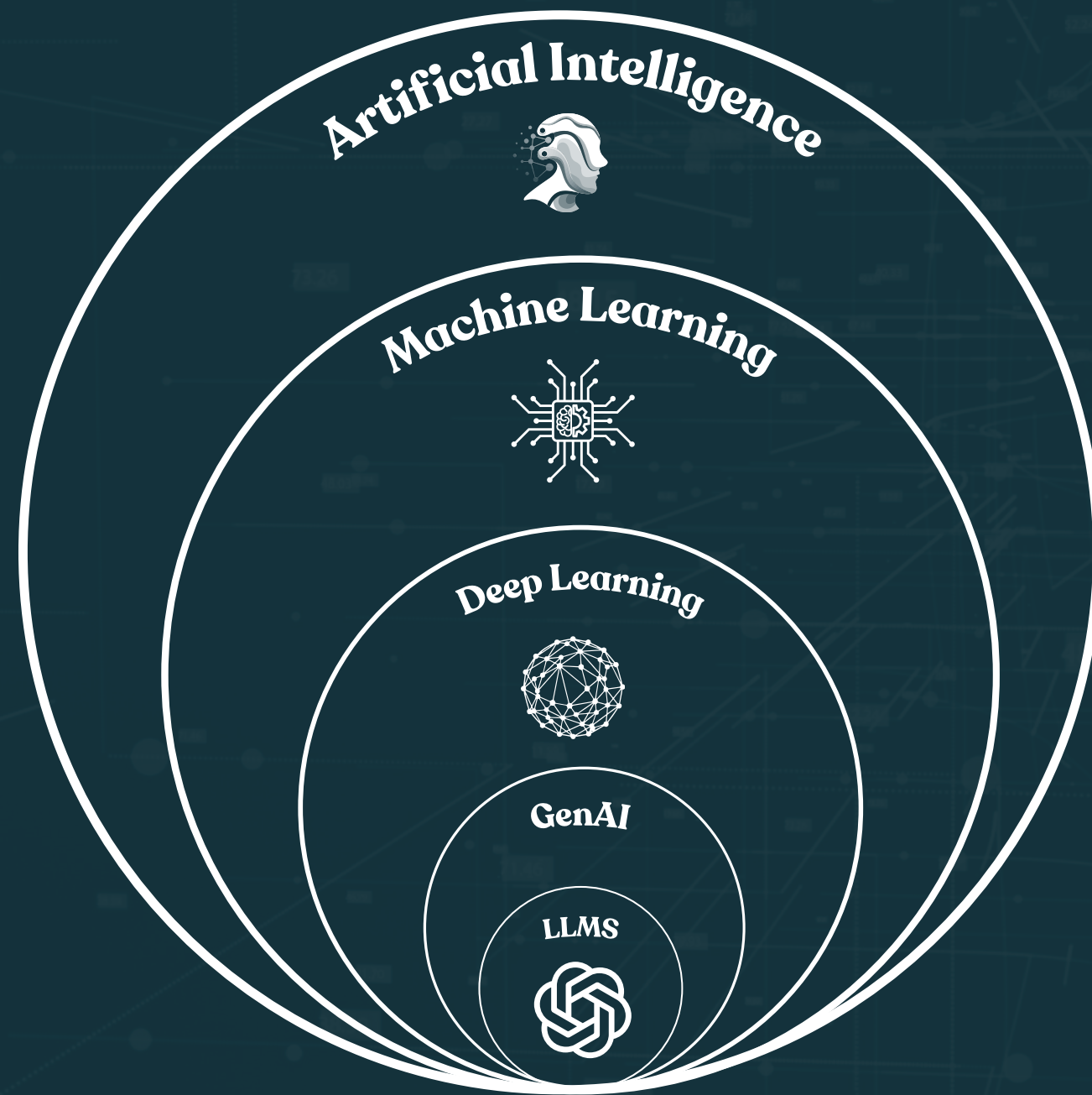


## Generative & Applied AI

Combine all elements into cohesive schedule with realistic delivery dates.



# What is Artificial Intelligence?

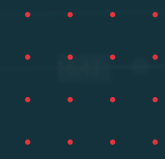


**Artificial Intelligence** is a technology used to develop software programs that can mimic the behaviour of a human brain and carry out similar action

**Machine Learning** is a subset of AI where systems improve automatically by learning from data and patterns rather than being explicitly programmed.

**Deep Learning** is a branch of ML that uses multi-layered neural networks to process large amounts of data, enabling breakthroughs in vision, speech, and natural language.

**Large Language Models (LLMs)** are advanced deep learning models trained on massive text datasets to understand and generate human-like language, powering tools like ChatGPT.



# LLMs-Use Cases



## **GPT-4 / GPT family (OpenAI)**

Trained on web, books & code to understand and generate human-like text across any topic.

**Use Case:**  
Enterprises needing high capability + plugin ecosystem



## **Claude 3 (Anthropic)**

Trained on curated web & licensed data for safe, ethical reasoning and long-form analysis.

**Use Case:**  
Regulated sectors, R&D, content teams



## **LLaMA 3 (Meta AI)**

Trained on open web & code datasets to enable custom, private, open-source AI applications.

**Use Case:**  
EU data compliance, custom internal AI



## **Gemini 1.5 (Google DeepMind)**

Trained on Google's multilingual & multimodal data for reasoning and search tasks.

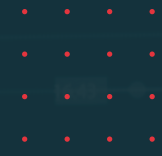
**Use Case:**  
Google Workspace, education, analysis



## **Copilot (Microsoft)**

Trained on Microsoft Graph, GitHub, and web data to enhance productivity and automation.

**Use Case:**  
Microsoft 365 apps, coding (GitHub), business reporting, workflow automation.



# Critical Skills Framework



# CRITICAL SKILLS FRAMEWORK

## Unique Human Skills

**These skills become more valuable as AI advances**

**Includes:** Emotional Social mastery , Curiosity & Wonder

## Human-AI Collaboration

**The new frontier of competitive advantage**

**Includes:** AI Literacy & Critical Thinking prompt Engineering

## Adaptive & Meta Skills

**The foundation for continuous evolution**

**Includes:** Change Leadership & Learning Agility



# EMOTIONAL & SOCIAL MASTERY

## Emotional Awareness & Authenticity



### Self-awareness in AI era

Recognising and naming your own emotional responses to AI disruption, workplace changes, and shifting professional identity



### Emotional Authenticity

Maintaining genuine human emotional expression in a world increasingly filled with AI-generated empathy and synthetic emotional content



### Detecting authentic vs. artificial emotion

Developing sensitivity to distinguish genuine human feeling from AI-crafted emotional appeals in communication



### Emotional Regulation

Managing anxiety, fear, excitement, and uncertainty triggered by rapid AI transformation whilst remaining present and effective



# EMOTIONAL & SOCIAL MASTERY

## Complex Relationship Management



### Multi-stakeholder Navigation

Understanding and managing competing interests, motivations, and communication styles simultaneously



### Trust Building at scale

Developing authentic relationships across cultures, hierarchies, and functional areas



### Conflict Transformation

Moving beyond resolution to transform disagreement into innovation opportunities



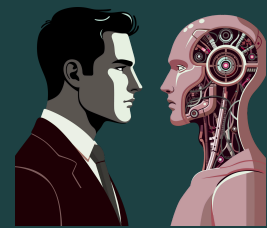
### Influence without Authority

Persuading and motivating people who don't report to you



# Emotional Mastery of Fear

## The Courage Imperative



### Emotional Courage

- Share AI fears & uncertainties
- Demonstrate Resilience
- Create Psychological safety



### Transformational Courage

- Maintain Focus on Human Dignity & Growth
- Opportunities in decision making regarding AI
- Adoption - Role changes & Org. Restructuring



### Ego Resilience

- AI Acceptance- AI may surpass Human Expertise
- Redefining Professional Identity around unique human contributions & collaborative leadership



# Emotional Mastery of Fear

## The Expertise Paradox

As AI becomes the go-to expert on technical knowledge, human value shifts from **knowing everything to knowing how to work with AI**, ask the right questions, and provide wisdom, context and ethical guidance that AI cannot



# The Authenticity Challenge

As AI generates increasingly sophisticated emotional content, from empathetic customer service responses to motivational messages, **the ability to offer genuine human emotional connection becomes more precious.**

People crave authentic emotional resonance that comes from share human experience, **not algorithmic simulation**



# CREATIVE & STRATEGIC EXCELLENCE

## Innovation & Ideation



### Pattern recognition across domains

Seeing connections between unrelated fields to generate novel solutions



### Constraint reframing

Turning limitations into opportunities by changing fundamental assumptions



### Future scenario imagination

Envisioning multiple possible futures and their strategic implications



### Innovation ecosystem orchestration

Bringing together diverse perspectives and capabilities for breakthrough thinking



# CREATIVE & STRATEGIC EXCELLENCE

## Systems Thinking



### Dynamic complexity understanding

Grasping how variables interact over time with feedback loops and delays



### Leverage point identification

Recognising where small changes create disproportionate positive impact



### Mental model examination

Questioning assumptions and revising worldviews based on new evidence



### Ecosystem perspective

Understanding organisations within larger industry and social systems



# STRATEGIC PROBLEM SOLVING

## Problem Solving under uncertainty



### Ambiguity tolerance

Making decisions and taking action with incomplete information



### Scenario-based planning

Developing multiple strategic options for different future conditions



### Adaptive strategy formulation

Creating plans that evolve whilst maintaining core purpose



### Opportunity recognition

Identifying possibilities others miss by connecting disparate trends



# CURIOSITY & WONDER



## Question Generation

Asking questions that open new exploration avenues

## Intellectual humility

Recognising knowledge limits and seeking different perspectives

## Investigation persistence

Following interesting questions despite unclear paths

## Wonder preservation

Maintaining curiosity despite increasing expertise



# DEEP EMPATHY



## Emotional resonance

Actually feeling what others experience beyond intellectual understanding

## Perspective immersion

Temporarily adopting others' worldviews

## Compassionate response

Taking action based on genuine care for others' wellbeing

## Shared humanity recognition

Connecting beyond roles and titles



# Human-AI Collaboration

*"The future of work is not human versus AI, but human with AI-  
where each strengthens the other's limitations."*

*Deloitte, 2020 – Human + Machine Report*



# HUMAN-AI COLLABORATION



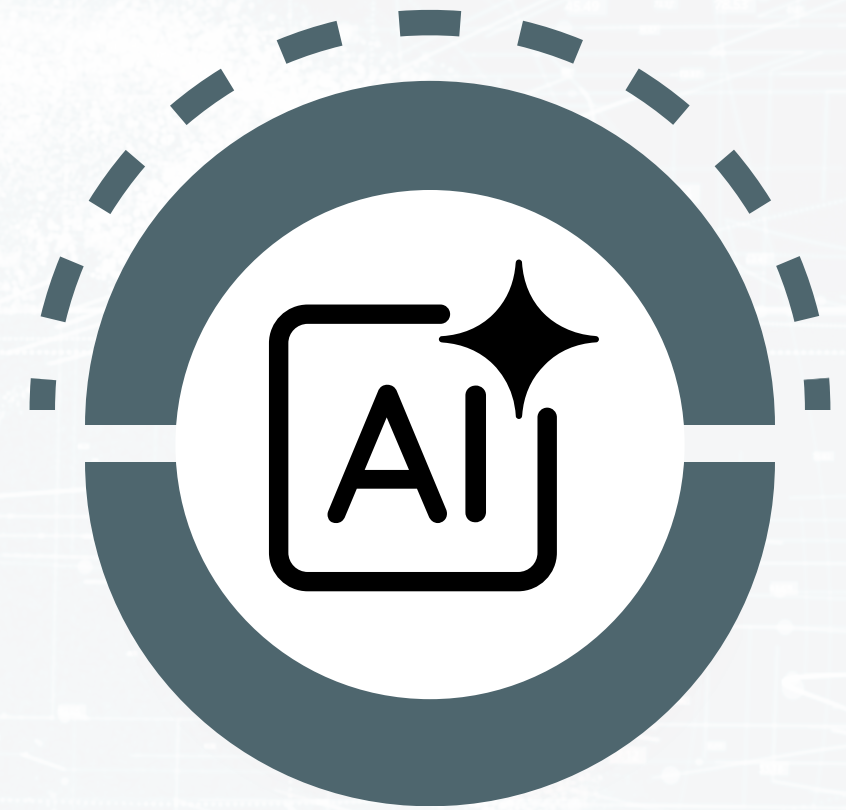
## AI Literacy Foundations

Strategic AI understanding: human vs. AI roles, tool selection, risk mitigation.  
Practical application skills: prompt crafting, validation, system optimisation.



## Digital Orchestration Mastery

Data intelligence: transforming insights, statistical reasoning, evidence-based scale.  
Workflow innovation: human-AI optimisation, integration, change management.



## Ultimate Goal

Seamless Human-AI Partnership: achieving outcomes neither could alone while preserving judgement and ethics.



# THE ILLUSION

Natural Language Answers  
“ChatGPT wrote this for me”

Speed and fluency that look  
“Intelligent”

Productivity Boost

Chat interfaces and friendly outputs

## Massive Training Data

Billions of words, code, and documents

## Transformer Architecture

Attention mechanisms linking words by context

## Statistical Prediction

Next word probabilities, not real “thinking”

## Context Windows & Embeddings

How the model remembers conversation flow

## Fine-tuning & Alignment

RLHF, safety, ethics, bias mitigation

## Hallucinations

Confident but **wrong** outputs

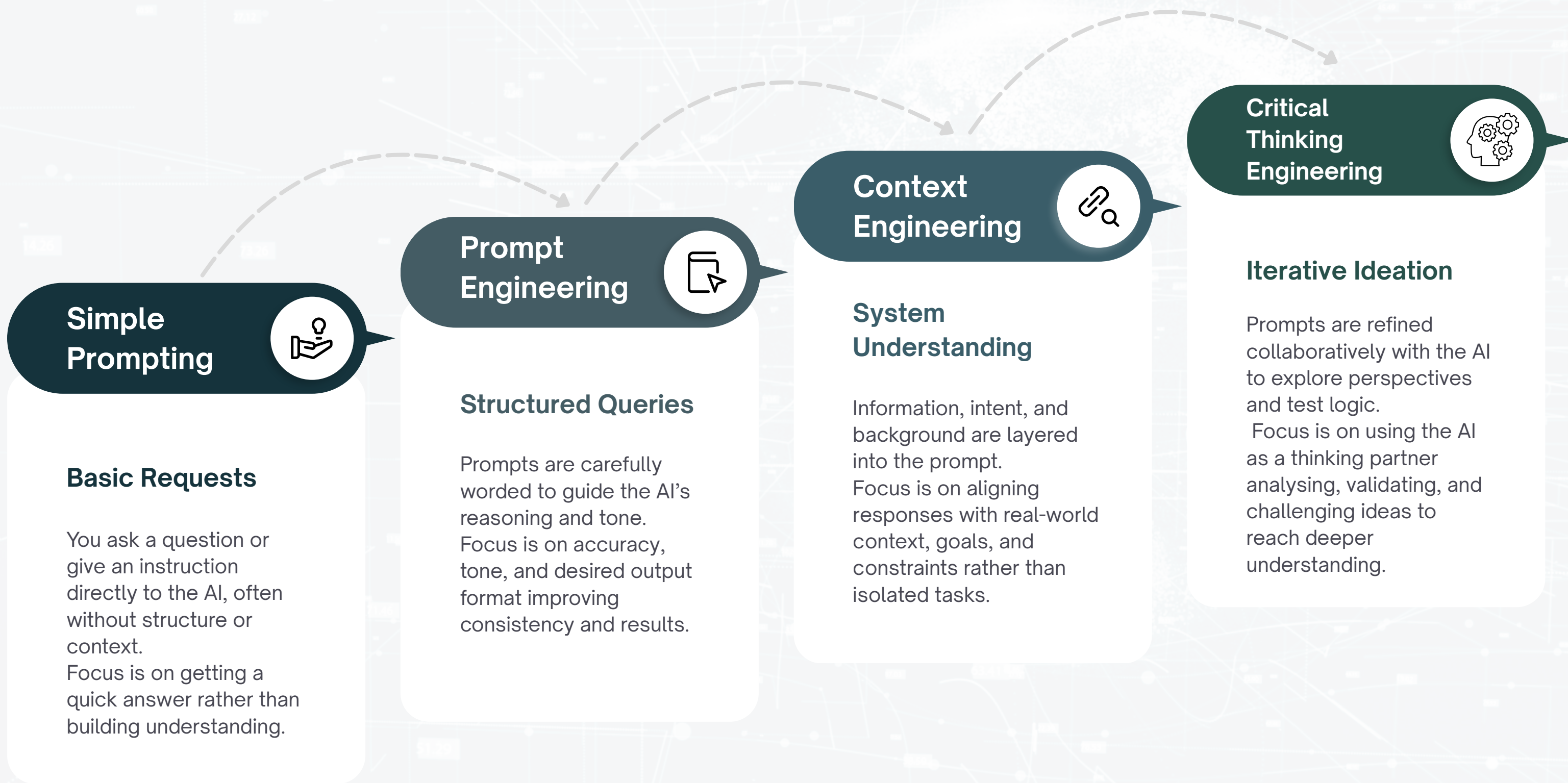
## Compute Power & Energy Costs

Huge infrastructure requirements

# THE REALITY



# CRITICAL THINKING PROMPTING





# SIMPLE PROMPTING

## Simple Prompting



### Basic Requests

You ask a question or give an instruction directly to the AI, often without structure or context. Focus is on getting a quick answer rather than building understanding.

### What does ChatGPT do

ChatGPT is a conversational AI developed by OpenAI. In simple terms, it's a system that can understand questions or prompts you type and generate responses that sound natural, relevant, and helpful.

Here's what it does in practice:

- **Answering Questions** – from simple facts (“What’s the capital of France?”) to complex business strategy queries.
- **Writing & Editing** – drafting emails, reports, contracts, presentations, marketing copy, or even creative writing.
- **Explaining & Teaching** – breaking down technical concepts (like AI, law, or finance) into clear explanations.
- **Problem-Solving** – helping with workflows, calculations, coding, data analysis, or decision frameworks.
- **Brainstorming & Creativity** – generating ideas for content, business models, campaigns, or product design.
- **Conversation & Coaching** – acting as a sounding board for ideas, role-playing scenarios, or giving structured advice.

Depending on the version (like the one you’re using now), ChatGPT can also:

- **See images** you upload and interpret them.
- **Generate images** (if asked).
- **Search the web** for up-to-date information.
- **Work with structured tools** (like calendars, emails, or documents).

👉 Think of it like a knowledgeable digital assistant that can adapt to different contexts—sometimes like a tutor, sometimes like a consultant, sometimes like a co-writer.

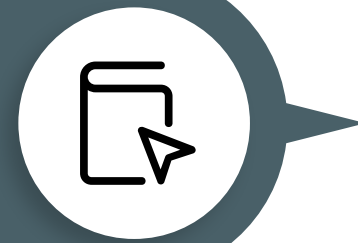
Do you want me to explain what it *cannot* do as well (so you get the limits)?





# PROMPT ENGINEERING

## Prompt Engineering



### Structured Queries

Prompts are carefully worded to guide the AI's reasoning and tone. Focus is on accuracy, tone, and desired output format improving consistency and results.

Explain what ChatGPT does, Create a list of Pros and Cons , providing 3 simple bullet points for each

Here's a clear breakdown:

#### ✔ What ChatGPT Does

- Answers questions and explains concepts in plain language.
- Helps write, edit, and brainstorm content.
- Supports problem-solving with ideas, frameworks, or step-by-step guidance.

#### 👍 Pros of ChatGPT

- **Fast & versatile** – can cover many topics instantly.
- **Always available** – works 24/7 without delays.
- **Customisable** – adapts to your tone, style, or context.

#### 🗨️ Cons of ChatGPT

- **Not perfect** – can make mistakes or “hallucinate” facts.
- **No human judgment** – lacks lived experience or emotional nuance.
- **Needs clear prompts** – works best when the question is well-structured.

Would you like me to also make this into a **slide-style format** so you can drop it straight into a presentation?



# CONTEXT ENGINEERING

## Context Engineering

### System Understanding

You ask a question or give an instruction directly to the AI, often without structure or context.

Focus is on getting a quick answer rather than building understanding.

You are a senior AI consultant from a Big 4 firm in Ireland. You are preparing a webinar slide for business owners who have limited technical knowledge. In a clear, professional, and non-technical tone, explain what ChatGPT does, and list three pros and three cons specifically for SMEs. Keep it concise so it fits on a presentation slide.

Here's a slide-ready version tailored for your SME webinar:

### What ChatGPT Does


- Acts as a virtual assistant that answers questions and explains concepts.
- Helps draft, edit, and summarise content (emails, reports, marketing).
- Supports problem-solving with ideas, recommendations, and analysis.

### Pros for SMEs

- **Saves Time:** Automates routine writing and admin tasks.
- **Cost-Effective:** Provides support without hiring extra staff.
- **Flexible Use:** Can be applied across HR, sales, finance, and customer service.

### Cons for SMEs

- **Not Always Accurate:** May produce errors or outdated information.
- **Data Risks:** Sensitive business data must be handled carefully.
- **Needs Oversight:** Works best when checked and guided by people.



### Context Window Vs Context Engineering

**Context window** is the amount of information an AI can process at once, while **context engineering** is the method of designing and structuring that information to get the best output.



# CRITICAL THINKING PROMPTING

## Critical Thinking Engineering



### Iterative Ideation

Prompts are refined collaboratively with the AI to explore perspectives and test logic.

Focus is on using the AI as a thinking partner, analysing, validating, and challenging ideas to reach deeper understanding.

You are a Senior AI & Digital Transformation Consultant from a Big 4 firm in Ireland.  
Your audience is business leaders and SME owners with limited technical knowledge.  
You are preparing content that helps them understand AI not just as a tool, but as a thinking partner.

Apply Critical Thinking Engineering to your response by doing the following:

**Define Clearly** – Begin with a simple, non-technical explanation of the core concept (e.g., ChatGPT, LLMs, or AI literacy).

**Contextualise** – Explain why it matters in the real world of SMEs (link to productivity, innovation, and competitiveness).

**Analyse** – Present both benefits and limitations, showing balanced reasoning and evidence-based insight.

**Synthesize** – Translate the insights into actionable next steps or guiding questions for SME leaders.

**Reflect** – Conclude with a critical reflection (e.g., what good AI use looks like, or how to think responsibly about it).

Your tone should be:

Professional but accessible – clear enough for non-technical audiences.

Strategic and evidence-based – like a Big 4 boardroom presentation.

Balanced and ethical – acknowledging both potential and risk.

### Role & Audience

You are a Senior AI & Digital Transformation Consultant from a Big 4 firm in Ireland.  
Your audience is SME owners and business leaders with limited technical knowledge.

### Goal

Produce a concise, board-ready explanation of (TOPIC) (e.g., ChatGPT, LLMs, AI literacy) that treats AI as a thinking partner, not just a tool.

### Framework — apply Critical Thinking Engineering

- 1. Define Clearly** – In 2–3 plain sentences, explain what (TOPIC) is without jargon.
- 2. Contextualise** – State why it matters for SMEs (productivity, cost, risk, competitiveness, innovation).
- 3. Analyse** – List 3 benefits and 3 limitations/risks specific to SMEs. Keep each to one line.
- 4. Synthesize** – Provide 5 actionable next steps (quick wins, governance, training, data foundations, pilot use cases).
- 5. Reflect** – Close with a one-sentence principle on responsible, value-driven use.

### Tone & Constraints

- Professional, accessible, evidence-aware; no hype.
- Ireland/SME context where relevant.
- Keep slide copy tight: headline + bullets (max ~70 words per section).
- Avoid unexplained jargon; if unavoidable, give a 5-word gloss.

### Output Format

- **Slide Title:** (clear, non-technical headline)
- **Section 1 – Definition** (2–3 sentences)
- **Section 2 – Why it matters for SMEs** (3 bullets)
- **Section 3 – Benefits** (3 bullets)
- **Section 4 – Limitations/Risks** (3 bullets)
- **Section 5 – Next Steps** (5 numbered actions)
- **Section 6 – Reflection** (1 sentence)
- *(Optional) Speaker Notes* (≤120 words): Add nuance, examples, and risk mitigations.

### Quality Checks

- Call out assumptions (e.g., data availability, staff capacity).
- Flag governance & compliance (GDPR, data security, human oversight).
- Prefer evidence or benchmarks over anecdotes (no citations needed on slide; mention sources briefly in notes).



# AI PROMPTING CHECKLIST

Checklist

## Define the Role & Context



State who the AI should act as  
Clarify audience and tone

## Set the Business Objective



Link the task to a clear business goal  
e.g. Small Enterprise: Time-saving and automation.

## Be Specific with Instructions



Define output type (summary, list, proposal).  
Limit scope ("3 insights", "100 words").  
Add constraints (tone, examples, sector relevance).

## Add Context & Ethics



Include industry, location, and regulations (e.g., GDPR, EU AI Act).  
Reference audience (staff, clients, board).  
Prompt for ethical reflection ("Consider responsible use").

## Analyse, Refine & Reflect



Review outputs for clarity and bias.  
Ask AI to justify or simplify ("adapt for SMEs", "make board-ready").  
Use feedback loops: draft- refine- finalise.



# HUMAN-AI COLLABORATION

## By Industry

### Manufacturing & Logistics

- Humans supervise and audit AI's decisions (e.g. in quality control, defect detection)
- AI suggests optimizations in production schedules; humans make tradeoffs based on domain knowledge or labor constraints
- In warehouse automation, humans collaborate with robots/AGVs, stepping in for exception handling

### Healthcare & Life Sciences

- AI assists in diagnosis, treatment planning, image analysis; human clinicians validate or override
- Human experts interpret AI insights in light of patient context, ethics, comorbidities
- Collaboration in drug discovery: AI proposes molecular designs, human chemists refine and test

### Finance & Banking

- AI monitors for fraud, market anomalies, credit risk; humans investigate flagged cases
- Human traders use AI models for scenario analysis or forecasts, but intervene during volatility
- Compliance and regulation tasks: humans review AI-generated reports for regulatory alignment

### Public Sector / Government / Policy

- AI aids in predicting social outcomes, resource allocation, risk assessment; humans set priorities, interpret fairness, and adjudicate
- Human oversight is critical to ensure accountability, transparency, and alignment with public values
- Collaboration in disaster response or urban planning: AI simulates scenarios, humans decide interventions

*Employers expect 39% of key skills required in the job market will change by 2030.*

# Adaptive & Meta Skills

*— World Economic Forum, Future of Jobs Report (2025)*



# Learning Agility

## Rapid Skill Acquisition



### Accelerated learning frameworks

Mastering new tools, technologies, and methodologies at unprecedented speed as AI capabilities evolve



### Pattern transfer

Applying learning from one domain to accelerate mastery in another, recognising underlying principles



### Just-in-time learning

Identifying exactly what needs to be learned when it's needed, rather than comprehensive upfront training



### Learning from failure

Extracting maximum insight from setbacks and rapidly iterating toward success

# Learning Agility

## Mental Model Updating



### Belief revision

Willingness to fundamentally change how you understand the world based on new evidence from AI insights



### Cognitive flexibility

Holding multiple perspectives simultaneously and switching between them as context demands



### Unlearning capability

Letting go of outdated knowledge, processes, and assumptions that no longer serve in an AI-augmented world



### Meta-cognition

Thinking about your own thinking, recognising biases, and actively correcting cognitive errors





# What is Changing?

Organisations that begin this journey **Today** will be positioned as **leaders in the AI-enabled future**

Key Market Insights →

**40%**

**of Working Hours**

could be automated in the next five years (PwC, 2024).

**60%**

**of Jobs**

will be transformed through automation and AI-driven tools (PwC, 2024).

**51%**

**of Skilled Workers**

say their job skills will change significantly by 2029 (PwC, 2024).

**95%**

**of Users**

report using AI within their business operations and Personal Life (State of AI Report, OCT, 2025).

# Change Leadership

Organisational Transformation



## Vision Articulation

Painting compelling pictures of AI-enabled futures that inspire action despite uncertainty



## Change Architecture

Designing transformation programmes that balance speed with sustainability and human needs



## Coalition Building

Creating networks of change champions across organisational levels and functions



## Momentum Management

Maintaining energy and commitment through the inevitable challenges of transformation

# Change Leadership

## Resistance Management



### Empathetic listening

Understanding the legitimate concerns underlying resistance to AI adoption



### Barrier identification

Recognising systemic, cultural, and individual obstacles to change



### Incremental wins

Creating small successes that build confidence and demonstrate AI's value



### Safety net creation:

Establishing support systems that allow people to take risks with AI experimentation

# Change Leadership

Culture Evolution



## Values alignment

Ensuring AI adoption reinforces rather than undermines organisational purpose



## Behavioural modelling

Personally demonstrating the curiosity, learning, and collaboration required in AI era



## Narrative shaping

Crafting stories that help people make sense of AI transformation and their role in it



## Celebration rituals

Creating ceremonies that honour both successes and the courage to experiment

# Change Leadership

Future Visioning



## Scenario planning

Developing multiple plausible futures to prepare for various AI evolution pathways



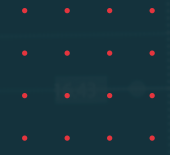
## Opportunity sensing

Recognising emerging possibilities before they become obvious to competitors



## Strategic foresight

Anticipating second- and third-order effects of AI adoption on business and society



# The EU AI Act

# The EU AI Act: Building Trust Through Responsible AI

The EU AI Act



## Why It Matters

- First comprehensive AI regulation globally sets the gold standard for ethical, transparent, and safe AI use.
- Applies to any organisation offering AI systems or using them within the EU market.

## Core Principles

- Risk-Based Approach: Prohibits unacceptable risks (e.g. manipulation, social scoring).
- Transparency: Users must know when they're interacting with AI.
- Accountability: Human oversight, documentation, and data governance are mandatory.
- Governance by Design: Compliance must be embedded from the start, not retrofitted later.

## What You Should Do Now

- Map your current AI use cases and classify risk levels (minimal, limited, high).
- Establish AI governance frameworks (ethics board, documentation, training).
- Work with partners who ensure data residency, GDPR alignment, and explainability.



# From Literacy to Augmented Intelligence

**Build Human–AI Partnerships** Use AI to augment, not replace — preserving judgement, ethics, and empathy.

**Combine Curiosity with Caution** Experiment, measure impact, but stay compliant and transparent.

**AI Literacy is Leadership Literacy** Understanding AI is no longer optional — it's a strategic capability for every decision-maker.

**Move from Tools to Transformation** AI success isn't about adopting platforms; it's about redesigning workflows and decisions with data at the core.

## **Your Next Step**

- Audit your AI readiness (skills, data, governance).
- Educate your teams, start small, scale wisely.
- Lead the shift: From using AI to orchestrating it.



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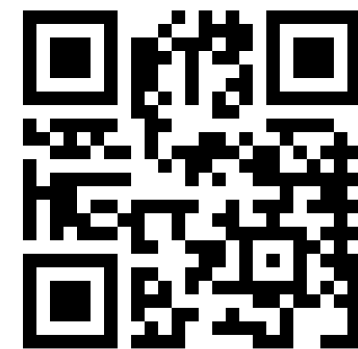
# THANK YOU



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