

A Simple Guide to Understanding Artificial Intelligence

EBSSI Executive AI Workshop

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Welcome to the AI Era

- Artificial Intelligence (AI) is rapidly becoming an essential workplace skill. Whether you work in business, education, healthcare, manufacturing, customer service, or the trades, understanding AI can help you work more efficiently, make better decisions, and solve problems in new ways.
- The goal is not to become an AI expert overnight. Instead, it is to learn enough about AI to use it effectively, responsibly, and confidently in your daily work.

What comes to mind when you hear the term "Artificial Intelligence"?

Consider:

- What words or ideas do you associate with AI?
- Have you used AI tools before? If so, how?
- What excites you about AI?
- What concerns or questions do you have?
- How do you think AI might affect your work or industry?

Common Responses

- Automation
- Robots
- Chatbots
- Machine learning
- Innovation
- Increased productivity
- Job changes
- Creativity
- Data analysis
- Ethical concerns
- Privacy and security

Key Takeaway

- AI is not just about futuristic technology. It is already being used every day to help people write, research, analyze data, create content, solve problems, and make decisions. Learning how to work with AI is becoming as important as learning how to use email, spreadsheets, or the internet.

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AI Is the Fastest-Adopted Technology in Modern History

- Artificial Intelligence is being adopted faster than any previous workplace technology. Organizations across industries are using AI to assist with writing, research, data analysis, customer support, content creation, and decision-making.
- Unlike many past technologies that required years of infrastructure changes, AI tools can often be used immediately, allowing individuals and teams to realize productivity gains within days or weeks.

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Why This Matters

AI can help people:

- Complete routine tasks more quickly
- Find information faster
- Generate ideas and solutions
- Analyze large amounts of data
- Improve communication and documentation
- Focus more time on higher-value work

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The impact of AI is being compared to major technological shifts

- Personal computers
- The internet
- Email
- Smartphones
- Cloud computing
- Each of these technologies changed how people work. AI is now accelerating that transformation.

What technology most changed your work?

- Personal computers
- Email
- Mobile phones
- Smartphones
- The internet
- Social media
- Cloud-based software
- Video conferencing
- Automation tools
- AI tools



Follow-Up Questions

- How did that technology change your daily work?
- Was the change immediate or gradual?
- What challenges came with adopting it?
- How does AI compare to that experience?
- Do you think AI will have a greater impact on your work than previous technologies?

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Key Takeaway

- Every major technological shift has changed the way we work. AI is the latest transformation—and for many organizations, it is happening faster than any before it.

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You Already Use AI Every Day

- Many people think of AI as a new technology, but most of us already interact with AI dozens of times each day—often without realizing it.
- AI powers many of the digital tools and services we rely on, helping us find information, navigate routes, receive recommendations, and protect our accounts from fraud.

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Examples of AI in Everyday Life

- **Communication**
 - Email spam filtering
 - Smart replies and autocomplete
 - Language translation tools
- **Search and Information**
 - Search engine results
 - Voice assistants
 - Personalized news feeds

Examples of AI in Everyday Life

- **Navigation and Transportation**
 - GPS route optimization
 - Traffic predictions
 - Ride-sharing matching systems
- **Shopping and Entertainment**
 - Product recommendations
 - Streaming service suggestions
 - Personalized advertisements

Examples of AI in Everyday Life

- **Banking and Security**
 - Fraud detection
 - Unusual activity alerts
 - Identity verification systems
- **Social Media**
 - Content recommendations
 - Friend suggestions
 - Photo recognition and tagging

Which AI-powered systems have you used today?

Consider:

- Did you use a search engine?
- Did you follow GPS directions?
- Did you watch recommended videos or shows?
- Did your email filter spam messages?
- Did you shop online and receive product recommendations?
- Did you use a virtual assistant or chatbot?

Key Takeaway

- AI is not just a future technology—it is already embedded in many of the tools and services we use every day. Understanding where AI appears in our daily lives is the first step toward using it effectively and responsibly.

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Why AI Matters

- The greatest value of AI is not that it replaces people—it helps people spend less time on repetitive, low-value tasks and more time on work that requires creativity, judgment, and human connection.
- Many professionals spend hours each week on tasks such as:
 - Writing routine emails
 - Summarizing documents
 - Searching for information
 - Creating reports
 - Scheduling and organizing work
 - Entering and formatting data
 - Drafting presentations
- AI can help complete many of these tasks faster, allowing people to focus on higher-value activities.

How AI Creates Value

AI helps organizations by:

- **Saving Time**
- Reducing the effort required for routine tasks.
- **Increasing Productivity**
- Helping employees accomplish more in the same amount of time.
- **Improving Decision-Making**
- Providing faster access to information and insights.
- **Supporting Creativity**
- Generating ideas, drafts, and alternative approaches.
- **Enhancing Customer Service**
- Providing quicker responses and support.

What would you do with five extra productive hours each week?

Think about how you might use that time:

- **At Work**
- Focus on strategic projects
- Improve customer relationships
- Learn new skills
- Complete important work that often gets delayed
- Mentor colleagues

What would you do with five extra productive hours each week?

- **Personally**

- Spend more time with family and friends
- Exercise or pursue hobbies
- Volunteer in the community
- Read and learn
- Reduce stress and improve work-life balance

- **Activity**

- List three repetitive tasks you perform regularly.
- Estimate how much time they take each week.
- Discuss whether AI could help reduce the time spent on those tasks.
- Calculate how much time you might save.

Key Takeaway

- AI's value is not measured by how much work it does for us, but by how much time it frees us to do work that matters most. When used effectively, AI can help individuals and organizations become more productive, creative, and focused.

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What AI Is and What AI Is Not

Understanding what AI can—and cannot—do is essential for using it effectively and responsibly.

- **What AI Is**

- Artificial Intelligence is a technology that identifies patterns in data and uses those patterns to:
- Generate text, images, audio, and code
- Predict likely outcomes
- Answer questions
- Summarize information
- Recognize patterns and trends
- Assist with decision-making
- AI works by calculating probabilities and predicting what content or response is most likely to be useful based on the information it has learned from.

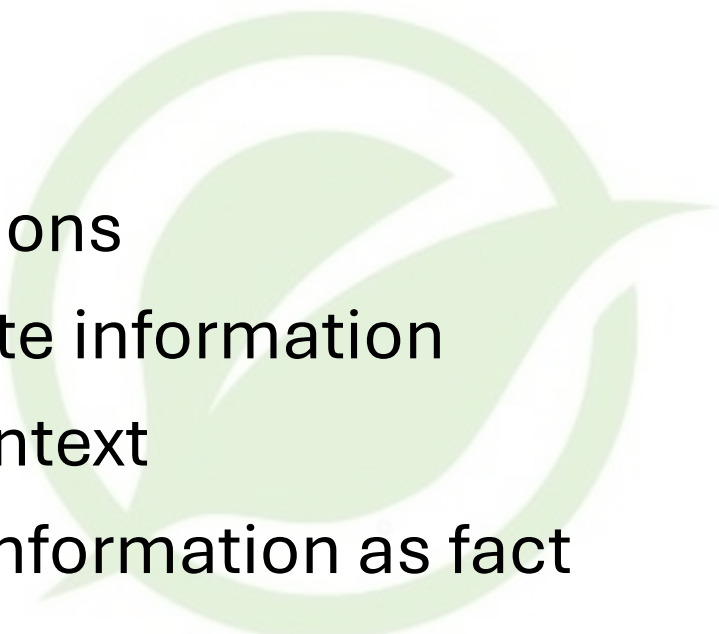
What AI Is and What AI Is Not

In simple terms: **AI predicts and generates.**

- **What AI Is Not**
- AI is **not**:
- Human intelligence
- Human judgment
- Human experience
- Human common sense
- Human values
- A source of guaranteed truth
- AI does not understand the world the way people do. It does not possess emotions, beliefs, intentions, or personal experiences.

Even when AI sounds confident, it can:

- Make mistakes
- Misinterpret questions
- Generate inaccurate information
- Omit important context
- Present incorrect information as fact



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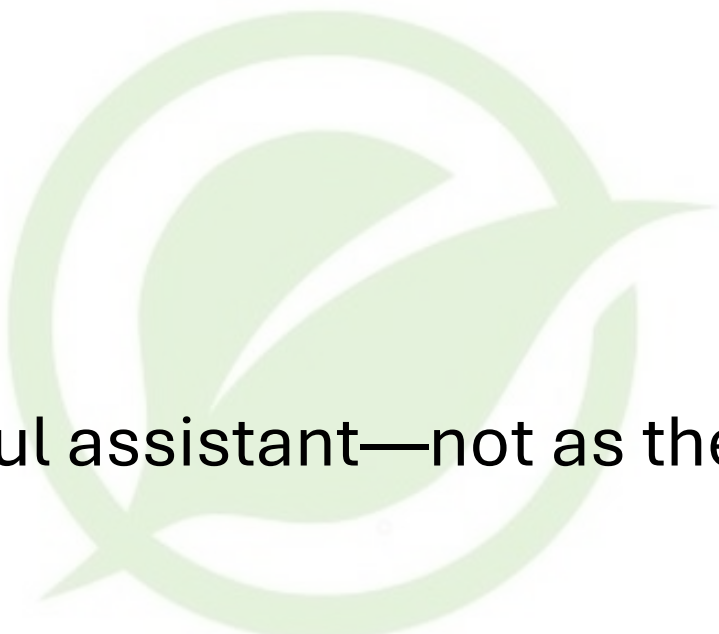
The Human Role Remains Essential

People are still responsible for:

- **Judgment**
- Determining whether information is appropriate and accurate.
- **Context**
- Understanding organizational goals, culture, and priorities.
- **Ethics**
- Making decisions about fairness, privacy, and responsible use.
- **Accountability**
- Taking responsibility for decisions and outcomes.

Key Message

- **Trust AI. Verify AI.**
- Use AI as a powerful assistant—not as the final authority.



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Before acting on AI-generated content

- Verify facts and sources
 - ✓ Review calculations and data
 - ✓ Check for missing context
 - ✓ Apply professional judgment
 - ✓ Follow organizational policies

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When would you trust AI's output, and when would you want to verify it yourself?

Consider:

- Writing and brainstorming
- Research and fact-finding
- Data analysis
- Customer communications
- Financial decisions
- Legal or regulatory matters
- Health and safety information

Key Takeaway

- AI can dramatically improve productivity and creativity, but it is not a replacement for human judgment. The most successful AI users combine the speed and capabilities of AI with critical thinking, expertise, and verification.
- **Remember:**
Trust AI. Verify AI.
AI is a powerful assistant, but people remain responsible for the final decision.

The Three Types Of AI

Traditional AI, Generative AI, and AI Agents represent increasing capability.

The Three Types of AI

- Artificial Intelligence can be viewed as three broad categories, each representing an increasing level of capability and autonomy.

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1. Traditional AI

Traditional AI is designed to perform specific tasks by identifying patterns, making predictions, or following predefined rules.

Examples

- Spam filters
- Fraud detection systems
- Recommendation engines
- Route optimization and GPS navigation
- Predictive maintenance systems

1. Traditional AI

Characteristics

- Focused on a specific task
- Works within defined parameters
- Produces predictions, classifications, or recommendations
- Usually operates behind the scenes

Example: A bank's fraud detection system identifies unusual transactions and flags them for review.

2. Generative AI

Generative AI creates new content based on patterns learned from large amounts of data.

- **Examples**
- ChatGPT
- AI image generators
- AI writing assistants
- AI coding assistants
- AI video and audio creation tools

2. Generative AI

Characteristics

- Generates text, images, audio, video, or code
- Responds to prompts and instructions
- Supports creativity, communication, and problem-solving
- Requires human guidance and review

Example: A marketing professional uses AI to draft a campaign proposal or generate social media content.

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3. AI Agents

- AI Agents go beyond generating content by taking actions to achieve goals.
- **Examples**
- Scheduling meetings
- Managing workflows
- Researching information and producing reports
- Monitoring systems and responding to events
- Coordinating tasks across multiple applications

3. AI Agents

Characteristics

- Can plan and execute multiple steps
- Uses tools and external systems
- Works toward defined objectives
- Requires human oversight and governance

Example: An AI agent receives a request to organize a project kickoff meeting, checks calendars, sends invitations, prepares an agenda, and distributes meeting notes.

Comparison

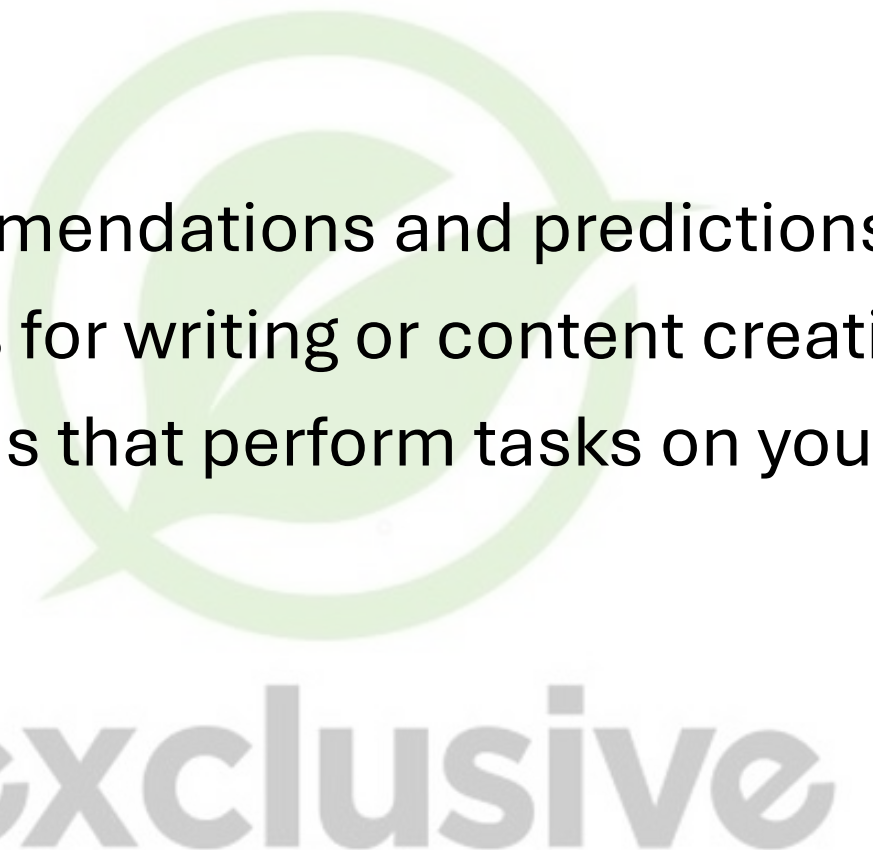
TYPE	PRIMARY FUNCTION	EXAMPLE
Traditional AI	Predicts and classifies	Fraud detection
Generative AI	Creates content	ChatGPT
AI Agents	Takes actions towards goals	Automated project coordinator

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Which type of AI do you currently use most often?

Think about:

- AI-powered recommendations and predictions
- Generative AI tools for writing or content creation
- Automated systems that perform tasks on your behalf



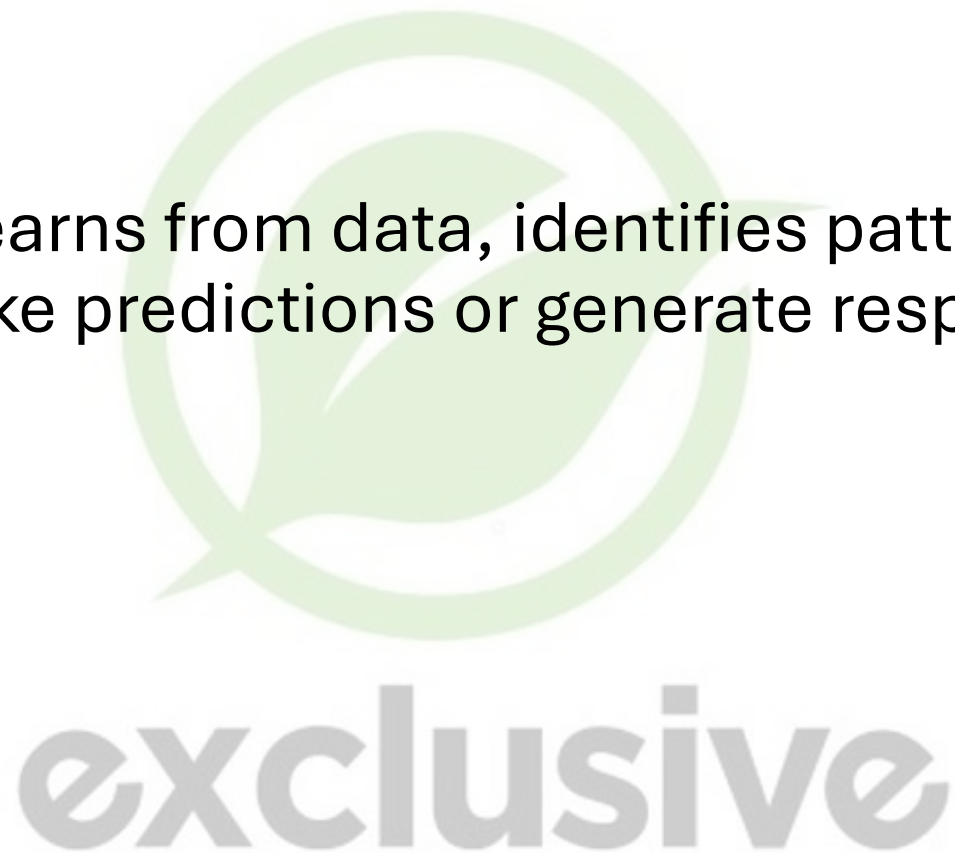
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Key Takeaway

- AI is evolving from systems that **predict**, to systems that **create**, and increasingly to systems that can **act**.
- A simple way to remember the progression:
- **Traditional AI → Predicts**
Generative AI → Creates
AI Agents → Acts
- Understanding these three categories helps us recognize where AI is today and where it is heading in the future.

How AI Works

- At its core, AI learns from data, identifies patterns, and uses those patterns to make predictions or generate responses.



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The AI Process

1. Data

- AI begins with large amounts of data.
- Examples include:
 - Text documents
 - Images
 - Audio recordings
 - Videos
 - Business records
 - Website content
- The more relevant and diverse the data, the better the AI can learn patterns.

The AI Process

2. Training

- During training, the AI analyzes data and learns relationships between words, images, numbers, and concepts.
- It is not memorizing every piece of information. Instead, it is learning patterns and probabilities.
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3. Pattern Recognition

- The AI identifies recurring patterns within the data.
- Examples:
 - Which words commonly appear together
 - How customers behave
 - What features indicate fraud
 - What image characteristics identify an object

The AI Process

4. Prediction

- When given a new input, the AI predicts the most likely next word, answer, classification, recommendation, or action.
- This prediction is based on the patterns learned during training.
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The AI Process

- **5. Response**
- The prediction becomes the output:
- A generated paragraph
- An image
- A recommendation
- A translation
- A classification
- A decision-support suggestion

Simple Example

Imagine an AI writing assistant.

- **Input:**
- *"Write a professional email requesting a meeting."*
- **What Happens:**
- The AI has been trained on large amounts of written text.
- It learned patterns found in professional communication.
- It predicts which words and phrases are most appropriate.
- It generates a complete email response.
- The AI is not "thinking" like a person—it is predicting the most likely and useful response based on patterns it has learned.

Visual Summary

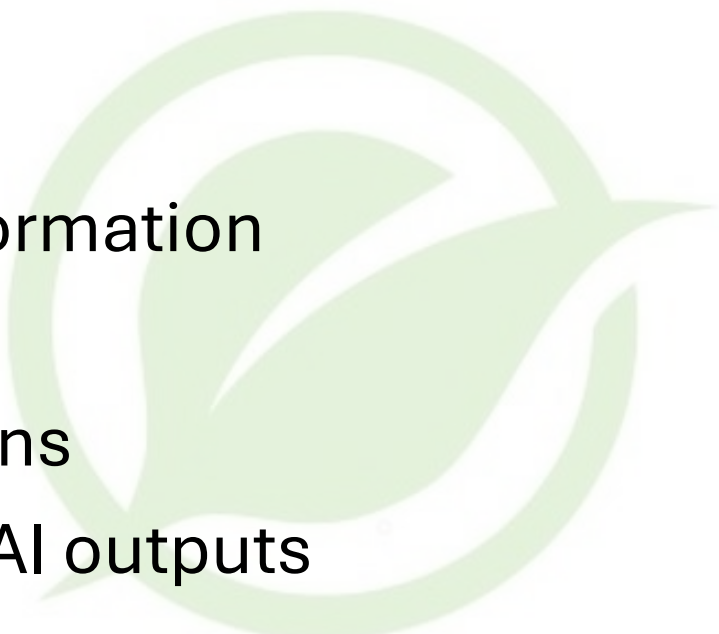
Data
↓
Training
↓
Patterns
↓
Predictions
↓
Responses



Where in this process do you think errors are most likely to occur?

Consider:

- Poor-quality data
- Biased training information
- Missing context
- Incorrect predictions
- Human misuse of AI outputs



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Key Takeaway

- AI works by learning patterns from data and using those patterns to make predictions. Whether it is generating text, recommending products, detecting fraud, or answering questions, the underlying process is fundamentally the same:
- **Data → Training → Patterns → Predictions → Responses**
- Understanding this process helps explain both AI's strengths and its limitations.

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The AI Landscape

- There is no single AI tool that does everything. Different AI technologies are designed to solve different types of business problems.
- Understanding the AI landscape helps organizations choose the right tool for the right task.



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Major Categories of AI Tools

Conversational AI

- Designed to interact with people through natural language.
- **Examples:**
 - ChatGPT
 - Customer service chatbots
 - Virtual assistants
- **Business Uses:**
 - Answering questions
 - Drafting content
 - Research assistance
 - Customer support

Major Categories of AI Tools

Content Creation AI

- Generates written, visual, audio, or video content.
- **Examples:**
 - Writing assistants
 - Image generators
 - Video creation tools
- **Business Uses:**
 - Marketing content
 - Training materials
 - Presentations
 - Social media content

Major Categories of AI Tools

- **Data Analysis AI**
- Finds patterns, trends, and insights in data.
- **Examples:**
- Business intelligence tools
- Predictive analytics systems
- Forecasting platforms
- **Business Uses:**
- Sales forecasting
- Performance reporting
- Risk assessment
- Decision support

Major Categories of AI Tools

Automation AI

- Performs repetitive business processes with minimal human intervention.
- **Examples:**
 - Workflow automation platforms
 - Document processing systems
 - Automated approval workflows
- **Business Uses:**
 - Data entry
 - Document processing
 - Administrative tasks
 - Process optimization

Major Categories of AI Tools

AI Agents

- Complete multi-step tasks and coordinate actions across systems.
- **Examples:**
 - Meeting scheduling agents
 - Research agents
 - Project management assistants
- **Business Uses:**
 - Workflow management
 - Task coordination
 - Information gathering
 - Operational support

Major Categories of AI Tools

Specialized Industry AI

- Built for specific industries and use cases.
- **Examples:**
 - Healthcare diagnostic support
 - Manufacturing quality control
 - Financial fraud detection
 - Agricultural monitoring systems
- **Business Uses:**
 - Industry-specific problem solving
 - Compliance support
 - Risk management
 - Operational efficiency

Matching AI to Business Problems

BUSINESS NEED	AI SOLUTION
Writing and communication	Conversational AI
Marketing content	Content Creation AI
Reporting and forecasting	Data Analysis AI
Repetitive administrative work	Automation AI
Multi-step workflows	AI Agents
Industry-specific challenges	Specialized AI

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Activity

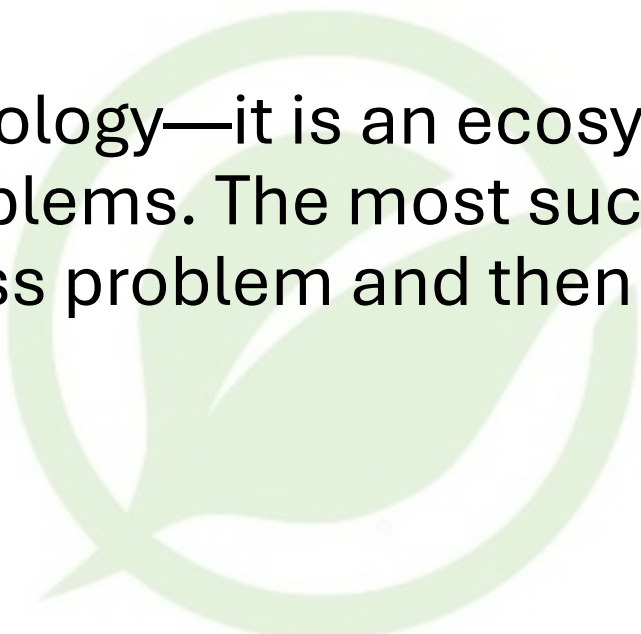
Think about your work and identify:

- A repetitive task you perform regularly.
- A communication challenge you face.
- A decision that requires analyzing information.
- A process that involves multiple steps.

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Key Takeaway

- AI is not one technology—it is an ecosystem of tools designed to solve different problems. The most successful organizations focus first on the business problem and then select the AI solution that best fits the need.



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Essential AI Vocabulary

- Understanding a few key AI terms will make it much easier to use AI tools effectively and communicate confidently about AI in the workplace.



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Essential AI Vocabulary

Prompt

- A **prompt** is the instruction, question, or request you give to an AI system.
- **Examples**
 - "Summarize this report."
 - "Create a project plan."
 - "Explain AI in simple terms."
- **Why It Matters**
 - The quality of the prompt often influences the quality of the response.
- **Simple Rule:**
Better prompts generally produce better results.

Essential AI Vocabulary

Large Language Model (LLM)

- An **LLM** is a type of AI trained on large amounts of text to understand and generate human language.
- **Examples**
- ChatGPT
- Claude
- Gemini
- Other AI assistants

Essential AI Vocabulary

- **What It Does**
- Answers questions
- Generates content
- Summarizes information
- Assists with research and analysis
- **Think of an LLM as the "engine" behind many AI chat tools.**

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Essential AI Vocabulary

Generative AI creates new content based on patterns learned from data.

- **Can Generate**

- Text
- Images
- Audio
- Video
- Code



Essential AI Vocabulary

- **Examples**

- Writing a report
- Creating an image
- Drafting an email
- Generating software code

- **Key Idea:**

Generative AI creates rather than simply analyzes.

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Essential AI Vocabulary

Hallucination

- A **hallucination** occurs when AI generates information that sounds convincing but is inaccurate, misleading, or completely false.
- **Examples**
 - Incorrect facts
 - Made-up sources
 - False statistics
 - Imaginary quotations
- **Why It Matters**
 - AI can sound confident even when it is wrong.

Essential AI Vocabulary

AI Agent

- An **AI Agent** is an AI system that can take actions to achieve a goal, often completing multiple steps with limited human involvement.
- **Examples**
 - Scheduling meetings
 - Researching information
 - Managing workflows
 - Coordinating tasks across applications
- **Difference from Chatbots**
 - A chatbot primarily responds to questions.
 - An AI agent can **plan, act, and complete tasks.**

Essential AI Vocabulary

Context Window

- The **context window** is the amount of information an AI can consider at one time.
- **Includes**
 - Your current prompt
 - Previous messages
 - Documents or data provided to the AI
- **Why It Matters**
 - If important information is missing from the context window, the AI may produce weaker or less accurate responses.
- **Simple Rule:**
The more relevant context you provide, the better the AI can help.

Quick Reference

Quick Reference Table

Term	Simple Definition
Prompt	Instruction given to AI
LLM	AI model trained on large amounts of text
Generative AI	AI that creates new content
Hallucination	AI-generated information that is incorrect
AI Agent	AI that can take actions to achieve goals
Context Window	Information AI can consider one at a time

Quick Reference

Activity

- Match the term to the example:
- Asking AI to create a meeting agenda → **Prompt**
- AI creates a new marketing slogan → **Generative AI**
- AI invents a fake reference → **Hallucination**
- AI schedules a meeting and sends invitations → **AI Agent**
- Information available to AI during a conversation → **Context Window**
- The technology powering many AI chat tools → **LLM**

Key Takeaway

- Learning a few core AI terms provides a foundation for understanding how modern AI systems work and how to use them effectively. These concepts will appear frequently as you continue exploring AI tools and applications.

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AI Adoption and Productivity Statistics

- Organizations around the world are adopting AI because it has the potential to improve productivity, efficiency, and the quality of work.
- While results vary by industry and role, research consistently shows that AI can help people complete tasks faster and, in many cases, produce higher-quality outcomes.

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What the Research Shows

Faster Task Completion

- Studies have found that employees using AI tools often complete certain knowledge-work tasks significantly faster than those not using AI.
- Examples include:
 - Writing and editing documents
 - Research and information gathering
 - Customer service interactions
 - Coding and software development
 - Content creation

What the Research Shows

Increased Productivity

- AI can help individuals:
- Produce more work in the same amount of time
- Reduce time spent on repetitive tasks
- Improve workflow efficiency
- Focus on higher-value activities

What the Research Shows

Support for Less Experienced Workers

- Research suggests AI can be especially valuable for newer employees by:
- Providing guidance
- Reducing learning curves
- Improving consistency
- Increasing confidence and performance

What the Research Shows

Growing Workplace Adoption

- Organizations are increasingly using AI for:
- Content generation
- Data analysis
- Customer support
- Process automation
- Decision support
- Employee productivity

Important Considerations

AI does not automatically create productivity gains.

- Successful outcomes depend on:
- **Appropriate Use**
- Using AI for tasks where it adds value.
- **Human Oversight**
- Reviewing and validating AI-generated outputs.
- **Training and Skills**
- Learning how to write effective prompts and evaluate results.
- **Workflow Integration**
- Incorporating AI into existing business processes.

Where do you think AI could save the most time in your work?

Consider:

- Email and communication
- Research
- Reporting
- Documentation
- Scheduling
- Data analysis
- Customer interactions



Activity

- Identify one task you perform regularly.
- Estimate how long it takes each week.
- Consider how AI might assist with part of that task.
- Estimate the potential time savings.
- Discuss how you would use that saved time.

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Key Takeaway

- The evidence suggests that AI can improve productivity, especially for routine knowledge-work tasks. However, the greatest benefits come when AI is used thoughtfully, combined with human expertise, and integrated into effective workflows.
- **Remember:**
AI does not replace productivity skills—it amplifies them. The people who learn to work effectively with AI are often able to accomplish more, focus on higher-value work, and create greater impact.

What Industry Leaders Are Saying

- Across industries, business leaders increasingly view AI as more than a technology trend. It is becoming a strategic capability that can influence productivity, innovation, competitiveness, and long-term growth.
- While opinions vary on the pace and scale of change, there is broad agreement that AI will play a significant role in the future of work.

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Common Themes from Industry Leaders

AI Will Transform How Work Gets Done

- Leaders frequently compare AI to previous transformative technologies such as:
- Personal computers
- The internet
- Mobile technology
- Cloud computing
- The expectation is that AI will become a standard part of daily work across many professions.

Common Themes from Industry Leaders

Productivity Will Increase

- Many organizations are using AI to:
- Automate routine tasks
- Accelerate research and analysis
- Improve communication
- Support decision-making
- Reduce administrative workload
- The goal is not simply to work faster, but to allow employees to focus on higher-value activities.

Common Themes from Industry Leaders

AI Skills Are Becoming Important

- Employers increasingly value individuals who can:
- Use AI tools effectively
- Write effective prompts
- Evaluate AI-generated content
- Apply critical thinking and verification
- Integrate AI into workflows responsibly
- AI literacy is becoming an important professional skill, similar to digital literacy and data literacy.

Common Themes from Industry Leaders

Human Skills Remain Essential

- Industry leaders consistently emphasize that AI does not replace uniquely human capabilities such as:
- Leadership
- Creativity
- Judgment
- Empathy
- Ethics
- Relationship building
- Strategic thinking
- As AI capabilities grow, these human skills become even more valuable.

Common Themes from Industry Leaders

Responsible AI Matters

- Organizations are also focused on:
- Data privacy
- Security
- Transparency
- Bias mitigation
- Regulatory compliance
- Ethical use of AI
- Successful AI adoption requires governance as well as technology.

What This Means for Employees

The question is increasingly shifting from:

- **"Will AI affect my job?"**
- to
- **"How can I use AI to improve my work?"**
- Employees who understand AI and learn to work alongside it are likely to be better positioned to adapt to changing workplace expectations.

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What This Means for Employees

Which skill will become more important in an AI-enabled workplace?

- Consider:
- Critical thinking
- Communication
- Creativity
- Problem-solving
- Adaptability
- Leadership
- Technical skills
- Emotional intelligence



Key Takeaway

- Industry leaders increasingly see AI as a strategic business capability rather than simply another software tool. Organizations that successfully combine AI capabilities with human expertise, judgment, and creativity are likely to gain the greatest advantage.

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Your AI Opportunity

- Learning about AI is only valuable if it leads to action. The goal is not to become an AI expert overnight—it is to identify practical ways AI can help you work smarter, solve problems, and create value.

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Your AI Opportunity

1. One Thing I Learned

- What is one new idea or insight you gained about AI today?
- Examples:
- AI is already part of many tools I use every day.
- AI predicts patterns rather than thinking like a human.
- AI can help automate repetitive tasks.
- AI outputs should always be verified.
- AI Agents can perform multi-step tasks.

Your AI Opportunity

2. One Opportunity

- Where do you see an opportunity to use AI in your work or daily life?
- Examples:
- Drafting emails and reports
- Research and information gathering
- Meeting preparation
- Data analysis
- Customer communication
- Brainstorming ideas
- Content creation

Your AI Opportunity

3. One Action This Week

- What is one practical step you can take this week to begin using AI more effectively?
- Examples:
- Try an AI tool for a routine task.
- Use AI to summarize a document.
- Create a draft email with AI.
- Explore an AI-powered feature in existing software.
- Practice writing better prompts.
- Share an AI use case with a colleague.

Key Takeaway

- The future of AI adoption is not about technology alone—it is about people finding practical ways to use AI to improve their work and create better outcomes.
- Remember:
- **Learn One Thing**
- **Find One Opportunity**
- **Take One Action**
- Small steps taken consistently often lead to the biggest results.

Certificate of Course Completion

Element	A Simple Guide to Understanding Artificial Intelligence
Participant Name	Shelby Reddekopp
Course Name	A Simple Guide to Understanding Artificial Intelligence
Completion Date	
Instructor Signature	
Organization Logo	
Certificate Number	
Training Hours	
QR Verification (optional)	
Learning Outcomes	Optional A Simple Guide to Understanding Artificial Intelligence

