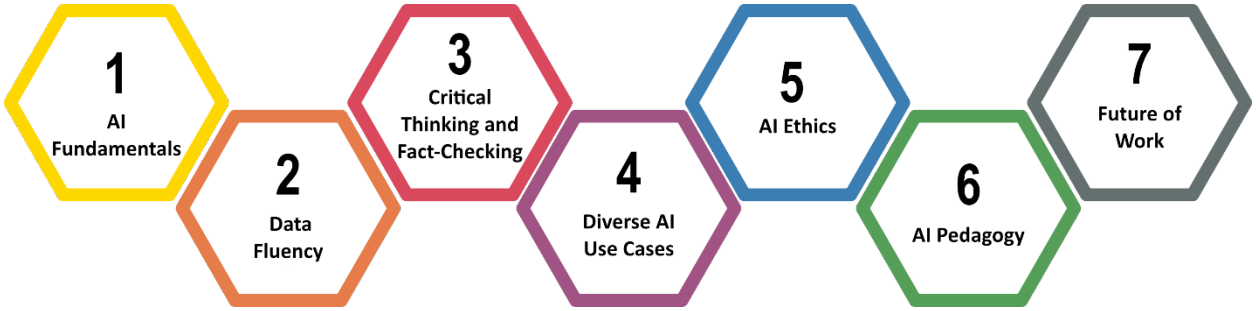
AI Literacy Competency Framework for Educators*



There are 7 key topic areas with 50 competencies.

Under each of the key area, there are three levels of competency:

- **Level 1 – Introductory**
  - At this level, learners develop a basic understanding of the topic. The focus is on awareness, recognition and description, equipping learners with the essential knowledge needed to engage with more advanced content.

- **Level 2 – Intermediate**
  - Building upon the foundational knowledge, learners at this level dive deeper into the intricacies of the topic. They engage in analysis, evaluation, and synthesis of information. The focus shifts from recognition to conceptualization and application, enabling learners to critically engage with the topic and its nuances.

- **Level 3 – Advanced**
  - At the advanced level, learners not only understand the topic deeply but also contribute to it. They engage in content creation and curation, thought leadership, and strategic activities within the topic. The focus is on active engagement, consultation, and contribution to the community.

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	Level 1 - Introductory	Level 2 - Intermediate	Level 3 - Advanced
AI Fundamentals	• Define commonly used terminology such as “training data”, “algorithm”, “generative AI”, “hallucinations”, etc. • Describe the distinctions between AI, machine learning, deep learning, and other subfields	• Identify major milestones, key techniques, and contributors in the development of AI • Review foundational AI research papers, policies, or projects and summarize the findings	• Explain the fundamental idea behind how machines "learn" and the role of algorithms in this process • Evaluate the strengths, weaknesses, and best-use cases for various AI algorithms
Data Fluency	• Identify the context in which data was collected and where it was sourced • List potential sources of bias or misrepresentation in datasets	• Evaluate the completeness, consistency, timeliness, accuracy, and relevance of data • Cleanse and normalize data to suit specific analytical needs • Utilize basic tools and software (like Excel or Python libraries) to perform data analysis	• Design and create effective visualizations tailored to the data type and intended message, using tools like Tableau, Power BI, or Python libraries • Engage in discussions, debates, or decisions, using data as a foundation to influence outcomes and drive informed decision-making
Critical Thinking and Fact-Checking	• Describe the context in which AI information is presented and the reliability of the sources • Recognize potential logical fallacies, mis-information, made-up facts, over-	• Compare and contrast content outputs and interpretations from various AI tools • Investigate the sources of AI claims, tracking back to original studies, datasets, or foundational literature	• Utilize specialized tools and databases to fact-check AI claims, ensuring the accuracy and validity of information • Formulate informed and balanced critiques of AI narratives, research, and claims

	generalizations, and bias • Identify historical instances where factual information was either leveraged accurately or distorted for propagandistic purposes from various media	• Analyze and contrast the methodologies used in fact-checking AI-generated outcomes with those employed in verifying historical narratives across various media forms	• Engage in discussions, forums, or publications, contributing informed opinions or clarifications to the broader AI community
Diverse AI Use Cases	• List examples of how AI is used in diverse sectors such as healthcare, education, business, finance, government, transportation, and more • Recognize the benefits and challenges posed by AI in each sector	• Describe the fundamental AI technology or methodology driving each use case, such as neural networks in image recognition or reinforcement learning in game playing • Describe the potential pitfalls or challenges in implementing AI in specific scenarios	• Evaluate the appropriateness of an AI solution for a specific problem or sector • Assess the long-term sustainability and viability of AI solutions in real-world scenarios
AI Ethics	• List the types of risks (perceived and real) stemming from AI applications, such as biases in algorithms, privacy concerns, misinformation spread, and job displacements • Define and explain ethical principles as related to AI, such as fairness, transparency, accountability, and privacy	• Assess the level of risks associated with specific AI implementations, considering both the immediate and long-term implications • Disseminate use cases on AI ethics, highlighting both positive examples of ethically-aligned AI and cautionary tales of AI gone awry • Examine the global adoption of AI technologies through the lens of the digital divide, considering	• Contribute to the creation of policies and guidelines within your organization or community at large, ensuring AI practices align with ethical standards • Mentor, guide, and influence peers, colleagues, and decision makers in ethical AI practices, establishing a culture of ethical AI use

		disparities in access, usage, and impact across different regions and demographics	
AI Pedagogy	• List various AI tools and platforms used in education • Recognize the benefits and potential limitations of using AI in educational settings	• Describe the pedagogical theories and principles that are enhanced or challenged by AI integration (in your personal network, schools, private sector, government, etc.) • Test and pilot various AI tools and platforms used in education • Create evaluation metric to assess the appropriateness and effectiveness of AI tools based on specific learning needs and context, industry standards, and stakeholders' inputs from your organizations	• Propose novel use cases or scenarios where AI can enhance teaching and learning experiences • Evaluate various AI for education tools using an evidence-based evaluation metric, considering factors such as learning outcomes, learner engagement, accessibility, and adaptability • Formulate guiding questions that help educators think critically about the integration and application of AI in their teaching methods
Future of Work	• Identify industries and roles most susceptible to AI-driven change, both in terms of automation and augmentation • Recognize the basic benefits and challenges AI brings to the workplace, such as efficiency improvements or potential job displacements	• Reflect on and discuss past technological shifts in the workplace for context (e.g., the Industrial Revolution) and draw parallels to the current AI-driven effects • Propose reskill or upskill interventions tailored to prepare the workforce for an AI-augmented environment	• Evaluate the broader implications of AI on work, considering factors like income inequality, job security, the balance of power between employers and employees, or between developed and developing nations • Engage in or lead discussions on creating an equitable AI-driven work ecosystem, ensuring that benefits are widespread and

			challenges are mitigated • Develop strategies for organizations, communities, or regions to adapt to the changing nature of work, considering factors like new job categories, organizational restructuring, or policy changes