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AI Literacy
A Guide for Academic Libraries

As artificial intelligence (AI) technologies increasingly shape our society, workforce, and personal lives, the need for comprehensive AI literacy is more important than ever. AI literacy goes beyond understanding AI tools; it equips individuals to critically evaluate, ethically navigate, and practically apply AI in real-world scenarios.

This essay provides a guide to AI literacy that addresses technical, ethical, critical, and societal dimensions of AI, preparing learners to thrive in an AI-embedded world.

What is AI Literacy?

AI literacy is the ability to understand, use, and think critically about AI technologies and their impact on society, ethics, and everyday life. This broad definition encompasses several interconnected components, each essential for developing a well-rounded understanding of AI.

The Need for AI Literacy in Libraries

Just as libraries once championed print, digital, and information literacy, we are now well-placed to become key players in advancing AI literacy as technology shapes the future. With AI transforming how information is retrieved, content is created, and decisions are made, librarians have a crucial role to play in helping our communities understand and engage thoughtfully with these technologies.

For library staff, AI literacy is essential in two key areas:

1. **Professional Development**: Equipping staff with the knowledge and skills to effectively integrate AI tools into library services and daily operations, enhancing efficiency and innovation.

2. **Community Engagement**: Empowering librarians to serve as educators, guiding patrons to critically evaluate and responsibly interact with AI-driven systems, fostering informed and ethical engagement.

The Components of AI Literacy
Technical Knowledge

We don't need to be coding experts to understand AI. Instead, it's about getting a basic grasp of essential concepts like machine learning, algorithms, and neural networks. Imagine being able to explain why a search engine prioritizes certain results or why a chatbot might misinterpret a question. This level of familiarity helps move beyond the surface and enables

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more meaningful discussions about how AI works and why it behaves the way it does. With this foundational understanding, individuals can approach AI with greater confidence and curiosity.

Ethical Awareness

AI systems don't exist in isolation; they function within complex human contexts and carry ethical responsibilities. In addition to understanding how these technologies work, ethical awareness is about critically examining the values and assumptions built into them. For instance, when a library employs an AI-driven recommendation tool, being ethically aware involves scrutinizing whether its recommendations uphold fairness, inclusivity, and transparency. It involves considering the real-world impacts of technical decisions, such as potential biases, accountability gaps, and privacy concerns. Ethical awareness calls for actively engaging with the broader implications of AI, recognizing that these choices affect people in tangible ways.

Critical Thinking

Critical thinking in AI literacy goes beyond merely questioning the outputs of AI systems. It involves leveraging skills like information literacy to critically assess the sources, data, and underlying assumptions that shape these models. In teaching information literacy, librarians can expand traditional evaluation techniques to include critical assessments of AI-generated information and its biases. For instance, librarians can draw on their expertise to examine the information an AI tool produces, probing into the data it was trained on and considering whose voices or perspectives might have been left out.

This practice encourages a more mindful engagement with AI, helping individuals understand that these technologies aren't infallible or neutral. As AI increasingly influences our perceptions and decisions, critical thinking empowers people to reclaim their agency and build a more informed, discerning relationship with technology.

Practical Skills

Practical skills are essential for using AI tools effectively in real-world situations. This includes building confidence to experiment with tools like ChatGPT, Claude, or Midjourney and understanding their relevance in specific contexts. For librarians, this might mean integrating AI-driven tools to improve research support or enhance digital collections.

However, practical skills go beyond proficiency with existing tools. They also encompass the judgment to know when and why to rely on AI and when human decision-making is necessary. As AI technologies evolve, fostering a culture of continuous learning and exploration is crucial to developing these skills.

Societal Impact

The societal impact of AI literacy is more than just understanding technical details; it prompts us to examine how AI reshapes the world we live in—culturally, economically, and environmentally. AI systems can perpetuate existing power structures or disrupt them in ways we might not anticipate. To fully grasp this, we must examine pressing issues such as biased hiring algorithms that can deepen inequalities, pervasive surveillance technologies that erode privacy, and the ways AI contributes to widening economic gaps.

Sustainability is a vital element of the broader conversation about AI's societal impact. While AI remains resource-intensive with a notable environmental footprint, discussions on sustainability should encompass more than just reducing consumption. The real potential lies in using AI to drive systemic changes that promote social and environmental well-being. For example, AI can optimize energy management in cities, creating smarter, more sustainable urban environments. It also has the capacity to revolutionize agricultural supply chains, increasing efficiency, reducing waste, and supporting sustainable practices across production and distribution. By integrating sustainability into the societal dimension of AI literacy, we can better understand AI's role not just as a technological advancement, but as a force capable of reshaping our economic, social, and environmental landscapes for the better.

Cross-Cutting Themes

In addition to these core components, several cross-cutting themes influence how we approach AI literacy:

1. **Human-AI Collaboration**: Focuses on using AI to enhance, not replace, human abilities. It promotes a mindset where individuals see AI as a supportive partner in tasks like decision-making, creativity, and problem-solving, rather than as a substitute for human judgment and skills.
2. **Lifelong Learning and Adaptation**: Emphasizes that AI literacy is not a one-time skill but an ongoing journey. With the rapid evolution of AI, continuous learning is crucial to staying updated on new tools, navigating emerging ethical challenges, and adapting to shifting societal impacts.
3. **Equity and Access**: Highlights the importance of inclusivity in AI literacy initiatives. It calls for libraries and educational institutions to provide equitable access to AI learning opportunities, ensuring that individuals from all backgrounds and skill levels can engage meaningfully with AI technologies.

These cross-cutting themes interact with every component of AI literacy, reinforcing the principles of collaboration, adaptability, and inclusivity throughout the entire framework.

Conclusion

For academic libraries, AI literacy is emerging as a foundational competency essential for navigating a world increasingly dominated by algorithms. Increasing our focus on AI literacy, including an emphasis on technical knowledge, ethical awareness, critical thinking, practical skills, and societal impact, encourages a deeper understanding of AI as more than just a set of digital tools. By embracing AI literacy, libraries can lead efforts to demystify AI, offer targeted programs, and foster interdisciplinary collaborations to explore AI's influence on research and learning. Through partnerships with faculty and campus technology units, librarians can integrate AI literacy into courses, create learning communities, and provide practical training on AI-driven tools. In doing so, academic libraries position ourselves as key players in shaping critical conversations about AI and guiding the next generation of scholars to engage thoughtfully and ethically with these technologies. ✐