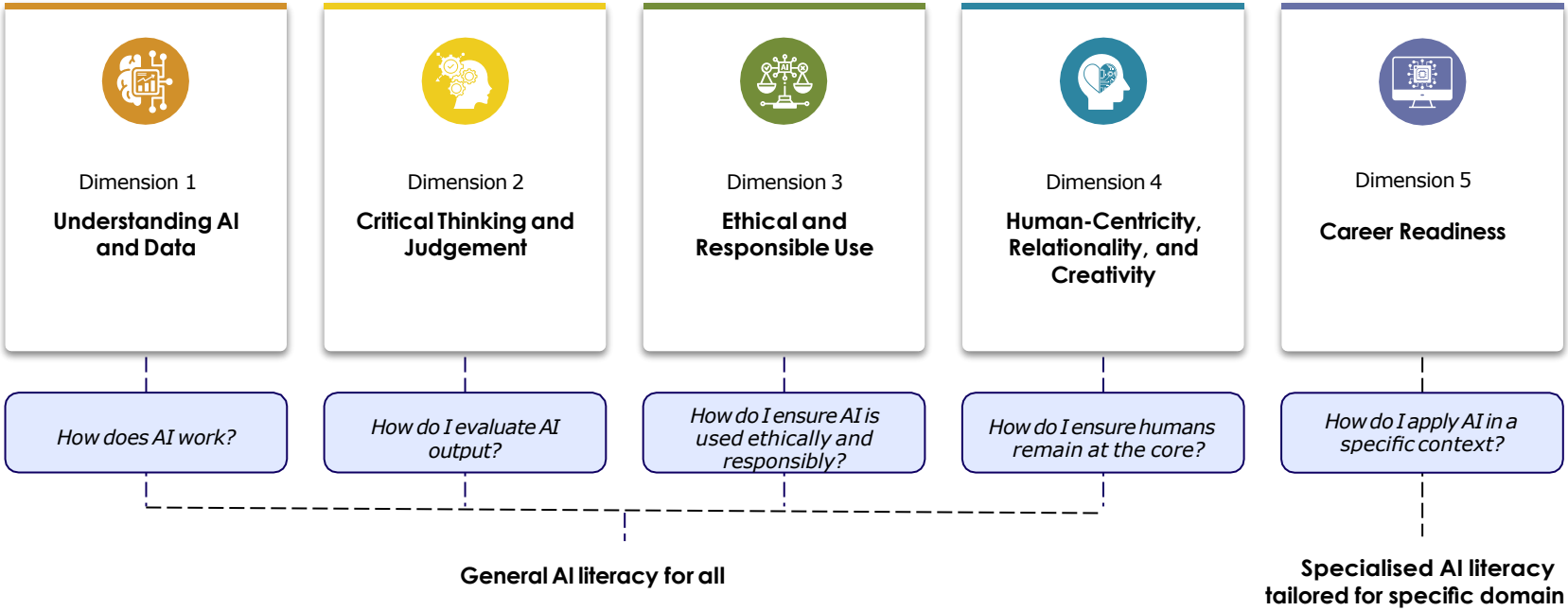
5 Dimensions of the USask Student AI Literacy Framework

AI Literacy (Digital Education Council, 2025): *The essential knowledge and skills needed to understand, interact with, and critically assess AI technologies. AI literacy includes the ability to use AI tools effectively and ethically, evaluate their output, ensure humans are at the core of AI, and adapt to the evolving AI landscape in both personal and professional settings.*



5 AI Literacy Dimensions Defined

Literacy Dimensions	Definition
Understanding AI and Data *How does AI work?*	Encompasses understanding how AI systems work, the principles of data collection, processing, and interpretation, and the implications of AI-generated output. Proficiency in this area enables individuals to critically engage with AI tools, assess their capabilities and limitations, and make informed decisions about their use.
Critical Thinking and Judgement *How do I evaluate AI output?*	Focusses on the ability to evaluate AI-generated content, discern biases, and apply logical reasoning when using AI in decision-making. It includes skills such as verifying sources, identifying misinformation, recognising limitations in AI-generated insights, and ensuring that human judgment remains central to AI-supported processes. Critical thinking ensures that AI is used as a tool for augmentation rather than blind reliance.
Ethical and Responsible AI Use *How do I ensure AI is used ethically and responsibly?*	Covers the ethical considerations and governance frameworks necessary for responsible AI adoption. It includes understanding AI ethics principles (such as fairness, transparency, accountability, and privacy), recognising potential risks (such as bias, discrimination, and misinformation), and implementing responsible AI use practices (such as modifying use based on environmental impacts and respecting intellectual property). It also involves navigating regulatory and institutional guidelines to ensure compliance and integrity in AI applications.
Human-centricity, Realationality, and Creativity *How do I ensure humans remain at the core?*	Emphasises the importance of human skills in an AI-driven world, including empathy, adaptability, communication, lifelong learning, and mindset. As AI automates tasks, human-centered skills become critical in maintaining ethical decision-making, fostering inclusive and diverse AI practices, and ensuring AI aligns with societal values. It also includes managing AI's impact on human interactions and well-being in educational and professional environments.
Domain Expertise *How do I apply AI in a specific context?*	Focusses on the specialised knowledge and skills required to understand, assess, and manage the impact of AI within a specific academic or professional context. It includes the ability to critically evaluate AI applications within a given discipline, adapt AI tools to enhance professional practices, and navigate domain-specific ethical, regulatory, and operational challenges.

USask AI Literacy Framework

Competency Level

Literacy Dimensions	Level 1	Level 2	Level 3
 Dimension 1 **Understanding AI and Data**	AI and Data Awareness	AI and Data in Action	AI and Data Optimisation
 Dimension 2 **Critical Thinking and Judgement**	Question AI Output	Evaluate AI Output	Challenge AI Output
 Dimension 3 **Ethical and Responsible Use**	Understand Risks	Apply Responsible Practices	Shape Responsible Practices
 Dimension 4 **Human-Centricity, Relationality, and Creativity**	Awareness of Human-AI Interaction	AI as Collaborative Tool	Develop Human-Centred AI Practices
 Dimension 5 **Domain Expertise - Career Readiness**	Applied AI Awareness	AI Application in Professional Contexts	Strategic AI Leadership

Dimension 1: Understanding AI and Data

	Level 1 Question AI Output	Level 2 Evaluating AI Output	Level 3 Challenge AI Output
Description	Individuals develop a basic understanding of AI concepts, how AI systems function, and the role of data in AI decision-making.	Individuals can select AI tools for real-world tasks, understand how AI models work, and assess the role of data in AI performance.	Individuals critically engage with AI systems, assess their technical capabilities, and strategically integrate AI into decision-making.
Examples of Competencies	• Define AI and summarize its fundamental processes. • Identify when common *AI technologies are leveraged* in daily life. • Understand the basics of how AI processes data to generate output.	• Explain how AI models process data and generate output. • Identify factors affecting AI performance, such as data quality. • Understand how to apply AI tools to automate or support professional tasks.	• Compare different AI models and their applications for a variety of tasks. • Integrate AI into workflows for enhanced efficiency. • Communicate AI system capabilities and limitations to others.
Examples of Actions for Progression	• Engage with foundational AI training materials, including introductory online courses or textbooks. • Learn basic data concepts and how AI systems process information. • Consider how AI systems use training data. • Experiment with widely available AI tools (e.g. AI chatbots, translation tools, and recommendation systems) to observe how they function.	• Conduct comparative analysis of different AI models to evaluate their accuracy and limitations. • Work with datasets in AI applications, focusing on improving data format for better AI outputs.	• Lead projects involving AI integration, ensuring effective use of data pipelines and model selection. • Lead discussions or training sessions on AI integration, ensuring stakeholders understand AI strengths and limitations. • Contribute to institutional or policy discussions on AI and data governance. • Develop strategies for handling large datasets, and improve AI performance for the institution.

Dimension 2: Critical Thinking and Judgement

	Level 1 Question AI Output	Level 2 Evaluating AI Output	Level 3 Challenge AI Output
Description	Individuals can identify key evaluation criteria for AI output and understand that AI-generated content may contain biases or errors.	Individuals critically assess AI-generated content using established evaluation criteria and identify biases or inconsistencies.	Individuals demonstrate expertise in evaluating AI-generated output with rigorous methodologies, interrogating AI's reasoning processes, and assessing AI's impact on human cognition.
Examples of Competencies	• Understand the importance of verifying AI-driven insights with human judgement. • Understand basic evaluation criteria for AI-generated content, such as accuracy, consistency, and source reliability. • Identify a number of inconsistencies or biases in AI-generated content.	• Apply evaluation frameworks to assess the validity of AI-generated insights. • Identify and articulate biases or inconsistencies in AI-generated output. • Compare AI-generated information against multiple independent sources for verification.	• Apply logical reasoning to understand how AI generates responses, analyse the strengths and weaknesses of different AI models and their output, and effectively build upon them. • Effectively leverage AI capability to enhance critical thinking skills. • Recognise and manage the nuanced impacts of AI in complex, high-stakes situations.
Examples of Actions for Progression	• Study introductory materials on AI reliability and accuracy metrics. • Compare AI-generated content with verified sources to identify discrepancies. • Engage in case studies where AI-generated information led to errors or misinterpretation. • Explore AI tools to assess their reliability and accuracy.	• Develop structured evaluation rubrics for assessing AI-generated output in an academic or professional setting. • Conduct comparative studies of different AI models to assess reliability across domains. • Engage in interdisciplinary discussions on AI evaluation methodologies. • Start applying AI assessment frameworks to real-world scenarios as a part of *adaptive design and problem solving*.	• Conduct independent evaluation of AI tools, comparing their output across multiple sources for consistency and accuracy. • Refine evaluation methodologies based on exposure to new AI advancements and emerging best practices. • Publish assessments or research papers critically examining AI reliability in a specific domain. • Apply advanced AI evaluation frameworks to real-world professional, research, or policy contexts.

Dimension 3: Ethical and Responsible AI Use

	Level 1 Understand Risks	Level 2 Apply Responsible Practices	Level 3 Shape Responsible Practices
Description	Individuals understand fundamental AI ethics principles and can recognise potential risks, such as bias, misinformation, and discrimination.	Individuals apply ethical principles and frameworks to evaluate and mitigate risks associated with AI use in various professional and academic settings.	Individuals demonstrate expertise in evaluating, shaping, and advocating for ethical AI policies, governance frameworks, and institutional best practices.
Examples of Competencies	• Define key AI ethics principles (e.g. fairness, transparency, accountability, privacy). • Recognise how AI systems can perpetuate bias and inequality. • Identify ethical concerns in AI-use and AI-driven decision-making (e.g. hiring, surveillance, law enforcement, intellectual property and sustainability).	• Assess AI systems for compliance with ethical standards and legal frameworks. • Identify and mitigate risks related to bias, discrimination, and data privacy in AI applications, referencing the value of approved tools. • Implement strategies to ensure fairness and accountability in *AI problem-solving*.	• Critically evaluate ethical implications of AI adoption at an institutional or societal level. • Contribute to the development of AI governance frameworks and ethical AI policies. • Provide guidance on ethical AI adoption in professional, academic, or policy environments.
Examples of Actions for Progression	• Study introductory materials on AI ethics, including case studies of ethical failures in AI. • Reflect on personal experiences using AI tools and consider ethical implications. • Analyse a real-world case study where AI ethics were challenged, for example biased algorithms or misinformation spread by AI • Engage in discussions on ethical dilemmas involving AI decision-making.	• Conduct ethical impact assessments for AI applications in an organisation or research setting. • Engage in interdisciplinary discussions on responsible AI use across different sectors. • Reflect on USask guidelines for the ethical implementation of AI in a professional or academic environment. • Apply ethical AI principles in project development or policy analysis.	• Draft or contribute to ethical AI guidelines within an organisation, academic institution, or regulatory body. • Publish research, reports, or policy papers analysing ethical AI challenges and solutions. • Conduct workshops or training sessions on ethical AI adoption. • Collaborate with AI ethics advisory groups or contribute to national or international policy discussions.

Dimension 4: Human-Centricity, Relationality, and Creativity

	Level 1 Awareness of Human-AI Interaction	Level 2 AI as Collaborative Tool	Level 3 Develop Human-Centered AI Practices
Description	Individuals have a foundational understanding of how AI affects human decision-making, communication, and emotional intelligence.	Individuals integrate human-centered skills into AI-assisted environments to promote responsible, ethical, and inclusive AI use.	Individuals advocate for human-centered AI approaches, ensuring AI remains a tool that complements rather than replaces human skills.
Examples of Competencies	• Recognise how AI influences human behaviour, decision-making, and interactions. • Identify situations where AI may lack human sensitivity *and the capacity to nurture relationships (*e.g. AI-generated feedback, automated decision-making). • Understand the importance of relationality, *intercultural competency* and adaptability in AI-augmented environments.	• Apply *meaningful communication* strategies and human-in-the-loop strategies when using AI tools in professional and educational settings. • Identify opportunities to enhance human-centered skills and foster creative • thinking with AI and propose strategies for continued development. • Assess AI tools to ensure inclusivity for different user groups.	• Debate guidelines that might ensure AI complements, rather than replaces, human interaction and creativity • Contribute to research studies or pilots testing the impact of AI in human-centered roles • Analyse the impact of AI on workforce skills and creativity, and propose strategies for maintaining essential human abilities.
Examples of Actions for Progression	• Observe how AI influences human interactions in customer service, education, or workplace settings. • Reflect on personal experiences when using AI-powered communication tools (e.g. chatbots, virtual assistants). • Engage in discussions on the limitations of AI in recognising human emotions. • Explore literature on the psychological and social impact of AI in human interactions.	• Develop case studies on human-centered AI practices and their impact in different industries. • Participate in collaborative projects where AI is integrated into human-driven decision-making. • Explore frameworks for ensuring that AI tools respect social and cultural norms.	• Articulate key elements in balancing AI integration with human-centric skills. • Engage with industry or academic stakeholders to define best practices for human-AI collaboration. • Create presentations or guides advocating for human-centered AI principles in a specific profession or discipline.

Dimension 5: Career Readiness

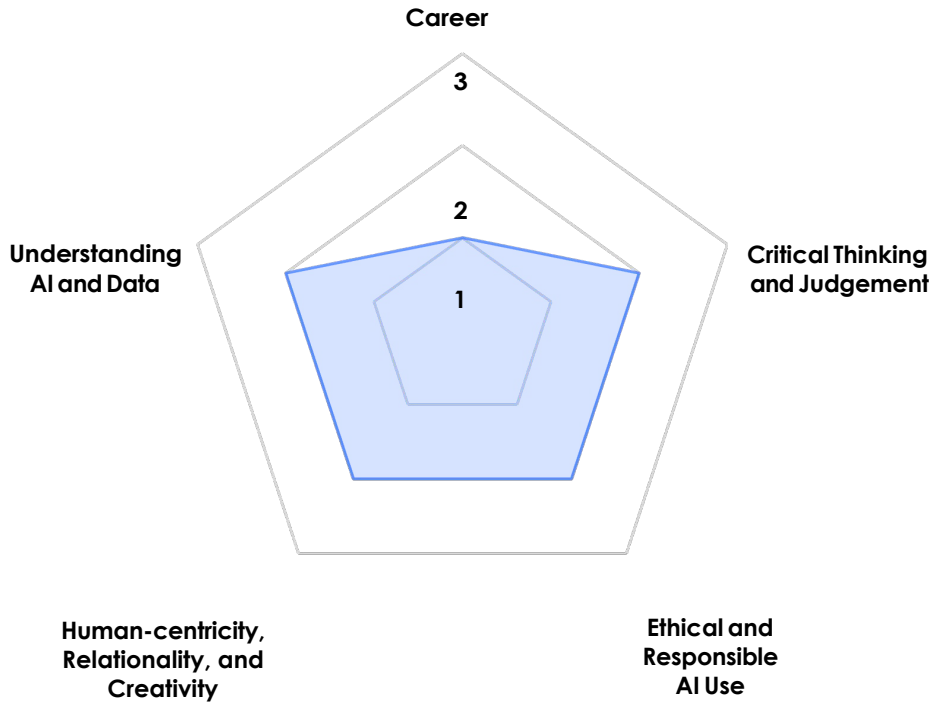
	Level 1 Applied AI Awareness	Level 2 AI Application in Professional Contexts	Level 3 Strategic AI Leadership
Description	Individuals develop a basic understanding of how AI is used in their specific field and can identify relevant AI tools and applications needed to *leverage technology* effectively in their job search or career.	Individuals can effectively use AI tools to support tasks, optimise workflows, and improve decision-making within their discipline.	Individuals develop advanced expertise in AI applications within their discipline, ensuring AI is effectively integrated into strategic decision-making.
Examples of Competencies	• Identify key AI applications relevant to a specific domain (e.g. AI in medicine, law, education, finance). • Recognise how AI is transforming professional roles and industry standards. • Understand the basic limitations of AI when applied in a particular field.	• Select and apply AI tools that enhance efficiency and accuracy in a professional or academic setting. • Assess the strengths and weaknesses of AI applications within specific processes or parts of the value chain. • Integrate AI insights into professional decision-making while understanding AI's role as a complement to human expertise.	• Evaluate and refine AI adoption strategies within the field, considering regulatory, ethical, and operational constraints. • Lead the implementation of AI-driven innovations in a professional or academic context. • Develop training materials or guidelines to enhance AI literacy among peers and colleagues in the field.
Examples of Actions for Progression	• Explore and experiment with domain-specific AI tools. • Participate in discussions or case studies related to AI applications in the field. • Engage in introductory training sessions focused on *leveraging technology* like AI for a specific sector.	• Implement AI-powered solutions in professional workflows, assessing their impact on efficiency and accuracy. • Compare multiple AI tools within the field to determine best-fit applications. • Conduct small-scale research or pilot projects testing AI solutions in a specific professional setting.	• Conduct industry-level assessments of AI adoption trends and their impact on professional practice. • Publish findings on AI applications in a particular field through research, white papers, or industry reports. • Participate in advisory or policy groups to influence AI adoption and governance at an institutional level.

AI Literacy Framework for Students

Literacy Dimensions	Competency Level: Level 1 Baseline	Level 2 Expected	Level 3 Forward-looking
Dimension 1 **Understanding AI and Data**	Recognise AI's role in daily life, studies, and society. Understand basic AI concepts and how AI systems use data.	Use AI tools for learning, research, and productivity. Understand AI limitations and biases.	Engage with AI implementation, optimisation, or customisation in my work. Strong technical understanding of AI models.
Dimension 2 **Critical Thinking and Judgement**	Understand the importance of verifying AI-driven insights. Recognise when AI -generated content may oversimplify or misrepresent concepts.	Understand and apply evaluation criteria for AI-generated content, such as accuracy, explainability, bias, and source reliability.	Critically analyse the strengths and weaknesses of different AI models and their output in various contexts.
Dimension 3 **Ethical and Responsible Use**	Understand academic integrity in the age of AI. Recognise ethical risks such as bias, misinformation, and plagiarism.	Apply ethical AI principles in coursework and research. Use AI tools responsibly while maintaining academic integrity.	Contribute to AI ethics discussions, policies, or student-led governance initiatives.
Dimension 4 **Human-Centricity, Relationality, and Creativity**	Recognise how AI affects communication, creativity, and human skills, and understand when human oversight is needed when using AI.	Use AI as a collaborative tool to enhance creativity and problem-solving. Develop adaptability in AI-driven environments.	Support peers to focus on human-centered skills when using AI, ensuring that AI is used as a complementary tool.
Dimension 5 **Career Readiness**	Identify AI trends and their impact on your future career. Understand how AI is changing the industry and what is expected by young professionals.	Use AI tools for field-specific tasks (e.g. AI for data analysis in business, AI-assisted research in sciences, AI for content creation).	Develop AI augmentation strategies for enhancing work and decision-making in professional settings.

Ideal Framework Mastery for Students

AI Competency Profile



Student Framework Mastery

Students should aim for the following mastery levels of the AI Literacy Framework:

Understanding AI and Data

0 1 2 3

Students should be able to use AI tools for learning, research, and productivity, and understand AI limitations and biases.

Critical Thinking and Judgement

0 1 2 3

Students should be able to understand and apply evaluation criteria for AI-generated content, such as reliability and accuracy of source content.

Ethical and Responsible AI Use

0 1 2 3

Students should apply ethical AI principles in coursework and research, and use AI tools responsibly while maintaining academic integrity.

Human-centricity, Relationality, and Creativity

0 1 2 3

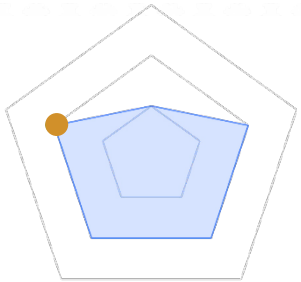
Students should use AI as a collaborative tool to enhance creativity and problem-solving, and be adaptable in AI-driven environments.

Domain Expertise: Career Readiness

0 1 2 3

Students should be able to identify AI trends and their impact on future careers, and understand how AI is changing the industry and expectations.

Elevating Students to the Desired AI Proficiency Level



Dimension 1
Understanding AI and Data

Desired level for students

0 1 2

Example of Teaching Strategy

Understanding AI Systems Through Data Exploration

Teach students how AI systems use data to generate output and how biases can emerge.

Classroom Applications

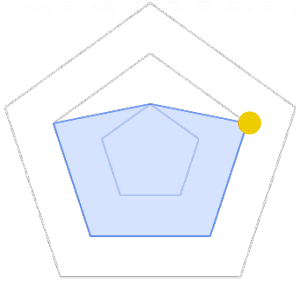
- Have students analyse datasets used in AI models and identify potential biases.
- Assign projects where students modify training data and observe changes in AI behaviour.
- Encourage students to critically assess sources of data and how they impact AI outcomes.

Mind Mapping AI Concepts and Interconnections

Combine visual and verbal representation to enhance comprehension of complex AI concepts.

- Ask students to create mind maps of AI technologies, ethical considerations, and real-world applications.
- Have students map relationships between AI models, data sources, and decision-making processes.
- Encourage students to present their mind maps in class for peer discussion.

Elevating Students to the Desired AI Proficiency Level



Dimension 2

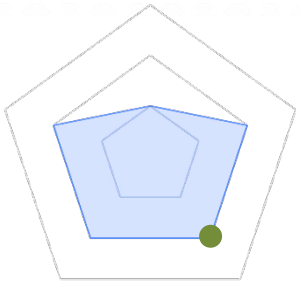
Critical Thinking and Judgement

Desired level for students

0 1 2 3

Example of Teaching Strategy	**Evaluating AI Output for Accuracy and Bias** Help students critically assess AI-generated content and recognise biases in its output.	**Evaluating Misinformation in AI-Generated Content** Train students to detect misinformation and misleading AI-generated content.
Classroom Applications	• Provide students with AI-generated articles or images and have them fact-check and annotate inaccuracies against key evaluation criteria. • Use real-world AI-generated misinformation cases for group analysis and discussion. • Have students compare AI output across different tools to assess reliability and consistency.	• Provide students with AI-generated content and have them verify its accuracy using trusted sources. • Discuss strategies for detecting deepfakes and AI-generated misinformation. • Ask students to compare AI output with traditional sources for reliability assessment.

Elevating Students to the Desired AI Proficiency Level



Dimension 3
Ethical and Responsible Use

Desired level for students

0 1 2 3

Example of Teaching Strategy

Ethical Dilemmas in AI

Engage students in discussions on ethical dilemmas related to AI's impact on society and personal lives.

Classroom Applications

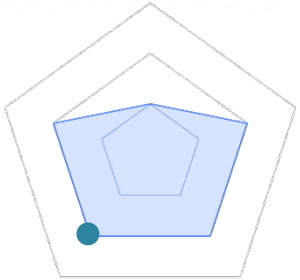
- Present ethical scenarios (e.g. AI's role in surveillance, bias in hiring algorithms, privacy concerns in AI-driven platforms).
- Facilitate group discussions, debates, and reflection exercises where students propose solutions.
- Allow students to present their perspectives through essays, posters, or creative storytelling.

Case-Based Learning on AI Failures and Bias

Learning from real-world AI failures helps students grasp the importance of responsible AI design.

- Analyse well-documented AI failures (e.g. biased facial recognition systems, AI-generated misinformation).
- Guide students to propose alternative solutions ensuring fairness, transparency, and accountability.
- Have students research and present contemporary AI ethics cases.

Elevating Students to the Desired AI Proficiency Level



Dimension 4

Human-Centricity, Relationality, and Creativity

Desired level for students

0 1 2 3

Example of Teaching Strategy

Visualising Human Involvement in the AI Life Cycle

Help students understand human involvement in AI decision-making and its impact on businesses and society.

Classroom Applications

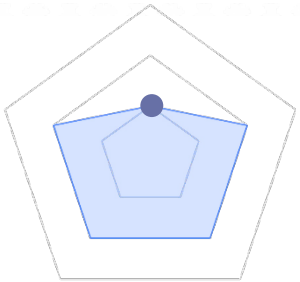
- Ask students to draw concept maps of human involvement across AI life cycle stages (data collection, algorithmic processing, decision-making, and evaluation).
- Include considerations such as data ownership, privacy, explainability, and human control.
- Encourage students to reflect on the consequences of losing human involvement at each step.

AI-Augmented Creative Problem-Solving

Explore AI as a tool for enhancing creativity, *adaptive design and problem-solving* while ensuring human-driven oversight.

- Assign projects where students use AI for creative tasks (e.g. AI-assisted writing, digital art).
- Facilitate discussions on how AI enhances creativity versus where human judgment remains essential.
- Have students critique AI-generated creative output and propose improvements.

Elevating Students to the Desired AI Proficiency Level



Dimension 5
Career Readiness

Desired level for students

0 1 2 3

Example of Teaching Strategy

Industry Engagement and Career Readiness

Prepare students for AI-integrated workplaces by exposing them to industry trends and required skills when *leveraging technology* in their job search or career.

Classroom Applications

- Host guest lectures by professionals using AI in their fields.
- Assign industry-based projects where students apply AI tools to field-specific challenges (experiential learning).
- Encourage students to research AI-driven changes in their intended careers and propose adaptation strategies.

AI-Enabled Decision-Making in Professional Fields

Analyse how AI supports decision-making in different industries.

- Assign case studies where AI-driven insights impact decisions in professional settings (e.g. medical, legal, or finance).
- Guide discussions on how AI can be used as an assistive tool rather than a replacement for professionals, focusing on *adaptive decide and problem solving* for young professionals.
- Have students identify risks of automating decision-making without human oversight.