

# Digital AI Studio

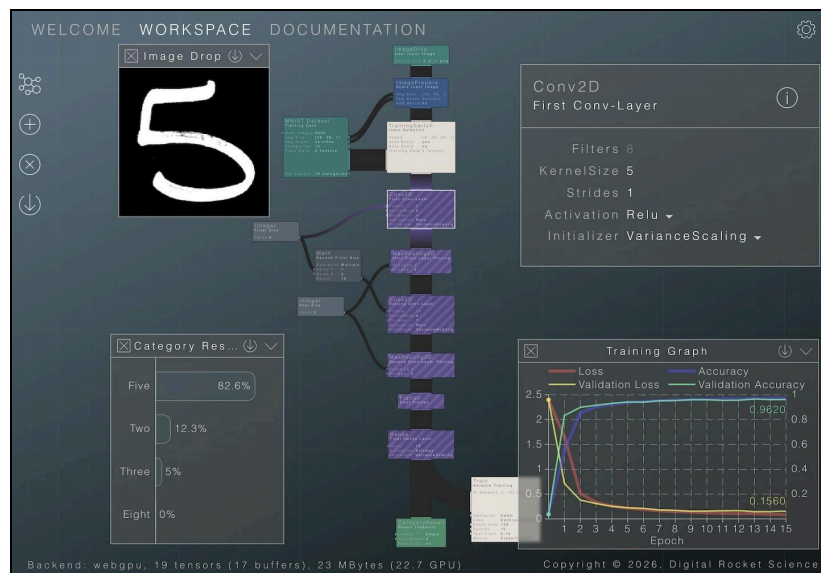
## AI Literacy & Standards Alignment

*Aligning visual, interactive AI learning with emerging global AI education frameworks*

### Introduction

Digital AI Studio is a web-based platform designed to support AI literacy through visual, interactive exploration of machine learning models. It enables students to build, train, and experiment with AI systems directly in the browser, without requiring programming or software installation. By making model structure, data flow, and training processes visible, the platform helps demystify how AI systems work at a foundational level.

As interest in AI education continues to grow, there is increasing emphasis on moving beyond the use of AI tools toward a deeper understanding of underlying concepts, systems, and design processes. Digital AI Studio is designed to support this shift by providing a hands-on, low-friction entry point into core AI ideas. The platform aligns with emerging AI literacy frameworks by enabling students to progress from conceptual understanding to practical experimentation and model creation within a structured, classroom-ready environment.



**Visual representation of an AI model within Digital AI Studio, showing how data flows through interconnected components during training and inference.**

## UNESCO AI Competency Framework

The UNESCO AI Competency Framework provides a structured approach to AI literacy, outlining the knowledge, skills, and perspectives students should develop as they engage with artificial intelligence. The framework emphasizes a progression from understanding AI concepts to applying and creating AI systems, while also considering human-centered and ethical dimensions.

Digital AI Studio aligns with several key areas of this framework by enabling students to interact directly with AI models, explore how they are constructed and trained, and experiment with their behavior in a visual, hands-on environment. The following sections highlight how the platform supports each of the primary competency areas identified by UNESCO.

**Reference:** [UNESCO AI Competency Framework for Students](#)

### *Human-Centered Mindset*

The UNESCO framework emphasizes the importance of understanding AI as a human-designed system, shaped by decisions about data, model structure, and intended use. It encourages students to recognize the role of human agency in the development and application of AI, as well as to consider when and how AI systems should be used.

Digital AI Studio supports this perspective by making the internal structure and behavior of AI models visible and interactive. Students engage directly with model components, data inputs, and training processes, helping them understand that AI systems are constructed, not opaque or autonomous. By experimenting with models in a controlled environment, students develop an intuitive understanding of how human choices influence outcomes, forming a foundation for more advanced discussions around the role of AI in real-world contexts.

### *Ethics of AI*

The UNESCO framework highlights the importance of understanding the ethical implications of AI, including issues such as bias, fairness, transparency, and responsible use. It encourages students to critically examine how AI systems can impact individuals and society, and to recognize the importance of accountability in their design and application.

Digital AI Studio supports foundational exploration of these ideas by allowing students to experiment with data, model structure, and training processes, and observe how these factors influence model behavior and outputs. Through hands-on interaction, students can begin to see how variations in data and design choices affect results, providing an entry point for discussions around bias, model limitations, and responsible use of AI systems. While the platform does not explicitly teach ethics as a standalone subject, it provides a transparent and interactive environment that supports the development of ethical awareness through exploration and guided instruction.

### *AI Techniques & Applications*

The UNESCO framework emphasizes understanding the core technical foundations of AI, including data, models, algorithms, and how these components work together to produce intelligent behavior. It encourages students to move beyond surface-level interaction with AI tools toward a deeper understanding of how systems are trained, evaluated, and applied.

Digital AI Studio directly supports these competencies by providing a visual, interactive environment where students can explore the full lifecycle of AI models. Students can load and examine pre-built models, observe how data flows through different components, and see how predictions are generated. They can also train models, evaluate performance, and experiment with different inputs and configurations, gaining hands-on experience with how AI systems learn and respond.

By enabling students to interact directly with model structure, data, and training processes, the platform supports a progression from conceptual understanding to practical application. Students are not limited to using AI systems, but can actively explore how they function and how their behavior can be influenced through design and experimentation.

### *AI System Design*

The UNESCO framework emphasizes the ability to design, build, and refine AI systems as a key component of AI literacy. This includes defining problems, selecting and organizing data, constructing models, and iteratively improving system performance based on evaluation and testing.

Digital AI Studio supports these competencies by enabling students to construct and modify AI models within a visual, node-based environment. Students can explore how different components connect to form a complete

system, adjust model structures, and experiment with how design choices influence performance. Through training and evaluation, they can observe how models evolve over time and refine their behavior through iterative experimentation.

By engaging directly in the process of building and adapting AI systems, students move beyond passive understanding toward active creation. This hands-on approach supports the development of problem-solving skills and provides practical insight into how real-world AI systems are designed, tested, and improved.

## Alignment with Classroom Practice and AI Learning Progression

In addition to alignment with formal AI literacy frameworks, Digital AI Studio supports common instructional approaches used in computer science and STEM education. The platform is designed to integrate into classroom environments through flexible, hands-on activities that emphasize exploration, experimentation, and iterative learning.

- **Hands-on, experiential learning:** Students actively engage with AI models by building, training, and testing systems rather than passively observing or using pre-built tools.
- **Progressive learning pathway:** Activities can support a progression from understanding concepts to applying and creating AI systems within a single lesson or across multiple sessions.
- **Low-friction classroom integration:** The platform runs entirely in the browser with no installation or coding required, enabling quick adoption in diverse classroom settings.
- **Model-based understanding:** Students interact directly with data, model structure, and training processes, supporting deeper conceptual understanding of how AI systems function.
- **Flexible use across contexts:** Activities can be adapted for different subject areas and applications, including image recognition, data analysis, and domain-specific explorations.

Digital AI Studio is designed to evolve alongside emerging AI literacy standards and classroom needs.

## Future Standards Alignment

Formal mapping to additional frameworks (such as CSTA and ISTE standards) is an area of ongoing development, as Digital AI Studio continues to evolve alongside emerging AI education initiatives.

## Conclusion

Digital AI Studio is designed to support the development of AI literacy in classroom settings through transparent, hands-on interaction with machine learning models. By aligning with emerging frameworks and classroom practices, the platform provides a practical pathway for students to move from understanding AI concepts to actively exploring and creating AI systems.

### Learn More

Platform: <https://www.digitalai.studio>

Demo (instant access): <https://www.digitalai.studio/demo/mnist>

Overview Video: <https://youtu.be/EZQwTKOt7ok>

Company: <https://www.digitalrocket.com>

**Create | Train | Understand**

Helping students and teachers explore AI from the inside