



Navigating AI in Education: Considerations for Policy Development and Educator Support

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Session Goals

1. Develop a shared understanding of AI and its workforce implications.
2. Review proposed skills for an AI-Ready Workforce and determine the support needed for implementation.
3. Evaluate and discuss state policy recommendations.



Table Discussion

How would you define
Artificial Intelligence (AI)?

Table Activity



AI



NOT AI



AI



NOT AI

Directions:

- Your table has been provided with a set of 6 cards. Each card lists the name of a technology tool.
- Distribute the cards among the table members.
- As a group, sort the cards into two columns: "AI" or "Not AI."
- Each table member will take turns sharing the name of their technology tool and explaining whether they believe it is an AI tool or not. If the tool is classified as AI, the table member should identify what data the tool uses and how decisions are made based on the data.
- The table member with the most years of legislative experience will go first, and the group will continue clockwise from that person.



AI



NOT AI

Key Takeaways:

- **Understanding the Characteristics of AI**—We differentiated between AI and non-AI technologies, gaining a clearer understanding of what constitutes AI. This activity was used to clarify the defining features of AI, such as **data processing, learning, and decision-making capabilities**.
- **Familiarity with AI Tools in Everyday Life**—Through exploring a variety of tools, we recognized how AI is embedded in many everyday technologies and its impact on various sectors, including education, communication, and transportation.
- **Preparation for Policy Discussions**—By distinguishing AI tools from non-AI technologies, we built background needed to engage in policy discussions about how to support AI skill development and its responsible use in education and workforce systems.



AI



NOT AI

Final Table Discussion:

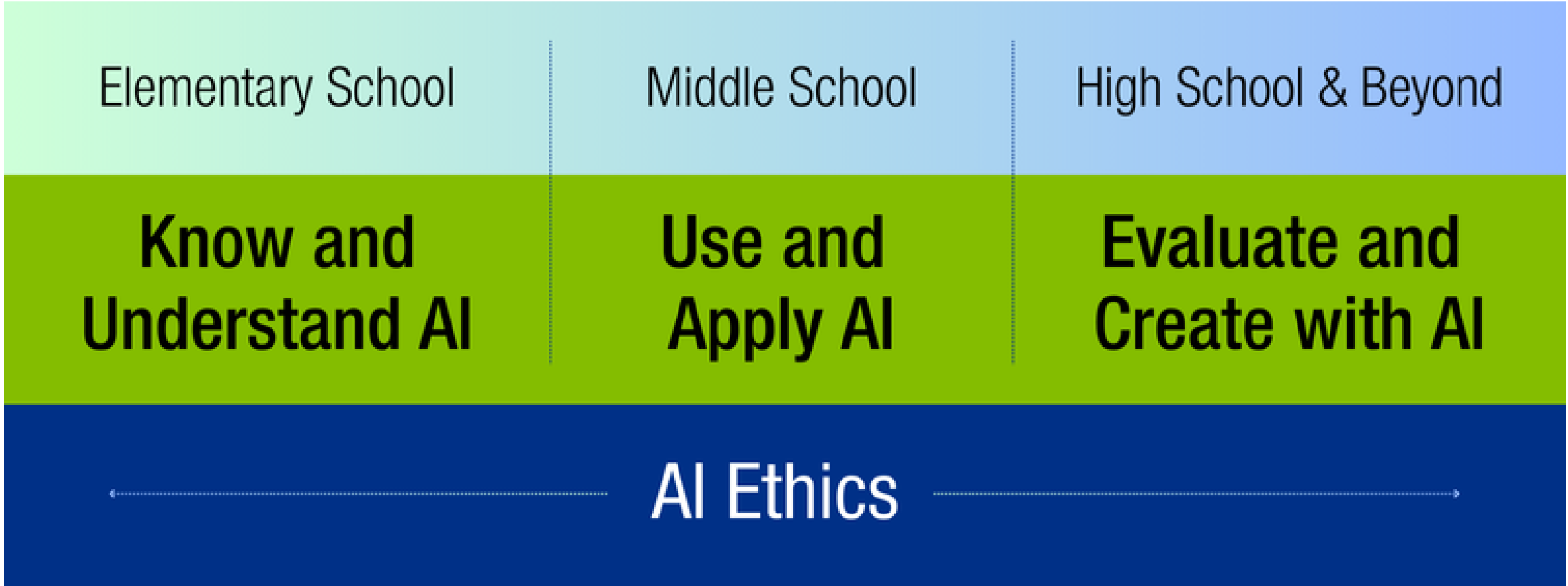
What skills will students and adults need to become more efficient users of AI-related technologies?

Skills for an AI-Ready Workforce

Success
skills

Industry
baseline
skills

Technical
skills



Communication Skills

Problem Solving

**Leadership &
Project Management**

Adaptability

**Teamwork &
Collaboration**

**Continuous
Learning**

Critical Thinking

Creativity



Industry Baseline Skills



Technical Skills

Artificial Intelligence

Machine Learning

Deep Learning

Generative AI

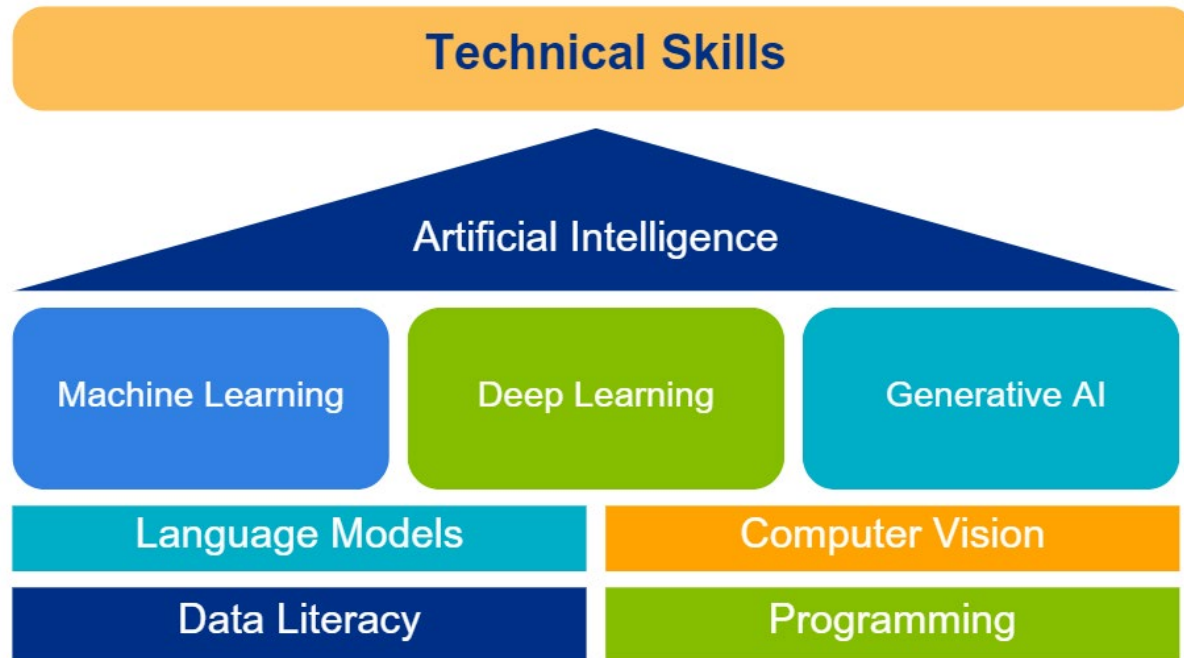
Language Models

Computer Vision

Data Literacy

Programming

Unpacking One Skill Group Together



As we review the Technical Skills Group:

- Reflect upon current systems in your state that can be used to support skill development.
- Identify options to provide educator support.

Data Literacy – Understanding how to collect, analyze, interpret and communicate data effectively, enabling informed decision-making and drawing meaningful insights from data.

Elementary School Know and Understand AI	Middle School Use and Apply AI	High School and Beyond Create with or in AI
Teaching basic data collection and organization skills through classroom projects, using charts and graphs to visualize simple data sets, and encouraging students to interpret and discuss their findings.	Expanding data literacy by teaching data preprocessing and analysis techniques, using spreadsheet software to handle larger data sets, and introducing basic data visualization tools to create more complex visual representations.	Developing advanced skills in data collection, preprocessing, analysis and visualization, engaging in projects that require comprehensive data handling and interpretation, and preparing for industry-recognized certifications in data science and analytics.

Programming – Understanding the fundamental concepts of coding and programming.

Elementary School Know and Understand AI	Middle School Use and Apply AI	High School and Beyond Create with or in AI
<p>Introducing basic coding concepts through visual programming tools like Scratch, engaging students in simple programming activities, and fostering logical thinking through games and puzzles. Students will understand the basics of how coding works without writing code.</p>	<p>Expanding programming knowledge by introducing text-based coding languages such as Python. Students will learn the foundational programming concepts, including loops, conditionals and variables.</p>	<p>Developing a deeper understanding of coding concepts and their application in various fields. Students will be exposed to more complex projects involving coding and data analysis, with an emphasis on understanding the logic and structure of code rather than developing proficiency.</p>

Machine Learning – Understanding how computers use supervised, unsupervised and reinforcement learning algorithms to analyze and learn from data to recognize patterns, make predictions and improve performance over time through experience and iterative training on diverse datasets.

Elementary School Know and Understand AI	Middle School Use and Apply AI	High School and Beyond Create with or in AI
Introducing students to machine learning by exploring how computers can learn from data to recognize patterns and make simple decisions.	Exploring key machine learning concepts by experimenting with data to help students see how algorithms and models can be used to classify and predict outcomes.	Creating and evaluating machine learning models, applying advanced concepts and assessing the performance and ethical implications of their work.

Machine Learning

Machine Learning (ML) is a subset of AI where machines learn from data. Instead of being explicitly programmed to perform a task, they analyze patterns in the data and improve their performance over time.

Example:

Netflix Recommendations: Netflix learns from what you've watched before and predicts what you might like next based on your viewing history and others with similar preferences.

Elementary AI curricula

GRADES: 3-5

NEW

How AI Makes Decisions



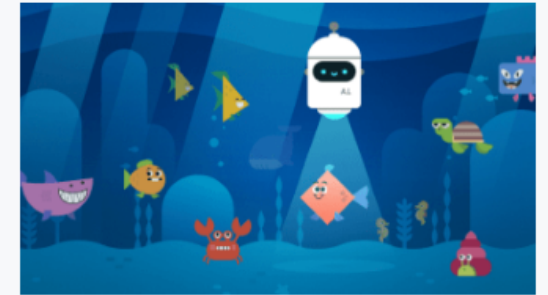
Introduce young students to AI and machine learning with hands-on activities using predictive data models. Students will practice making their own predictions and learn about data categorization and sorting.

Duration: 1 hour

Explore unit

GRADES: 3-12

AI for Oceans



Help A.I. clean the oceans by training it to detect trash! Learn about training data and bias, and how AI can address world problems.

Duration: 1 hour

Try activity

Deep Learning – Understanding how computers use advanced neural networks with multiple layers to learn from vast amounts of data, enabling them to recognize complex patterns and improve decision-making and performance over time.

Elementary School Know and Understand AI	Middle School Use and Apply AI	High School and Beyond Create with or in AI
Introducing students to deep learning by exploring how computers can learn complex patterns from data, similar to how the human brain processes information.	Exploring basic deep learning concepts by working with simple neural networks. Students will understand how layers of processing can improve the accuracy of predictions and classifications.	Building and evaluating deep learning models and experimenting with neural networks. Students will learn to solve complex problems while assessing their effectiveness and ethical considerations.

Deep Learning is a specialized form of machine learning that uses artificial neural networks (inspired by the human brain) to process and learn from large amounts of data.

Example:

Facebook: The system automatically suggests who is in the photo.

Generative AI – Understanding how AI systems can create new content, such as text, images, music and code by learning from existing data and using advanced algorithms to generate unique outputs and recognize errors or biases in AI-generated products.

Elementary School Know and Understand AI	Middle School Use and Apply AI	High School and Beyond Create with or in AI
Introducing students to generative AI by showing how computers can create content like simple stories or images based on patterns learned from examples. Students will begin to recognize that AI can sometimes make mistakes or produce unexpected results.	Exploring basic generative AI concepts by experimenting with tools that generate content such as text or images. Students will learn to identify and discuss errors (hallucinations) and consider how biases in the data might affect the AI-generated content.	Building and experimenting with generative AI models, creating original content and analyzing the results. Students will assess the quality, originality and potential biases in the generated content and understand the ethical considerations of using AI in creative processes, including the impact of data biases and the occurrence of hallucinations.

Generative AI – Understanding how AI systems can create new content, such as text, images, music and code by learning from existing data and using advanced algorithms to generate unique outputs and recognize errors or biases in AI-generated products.



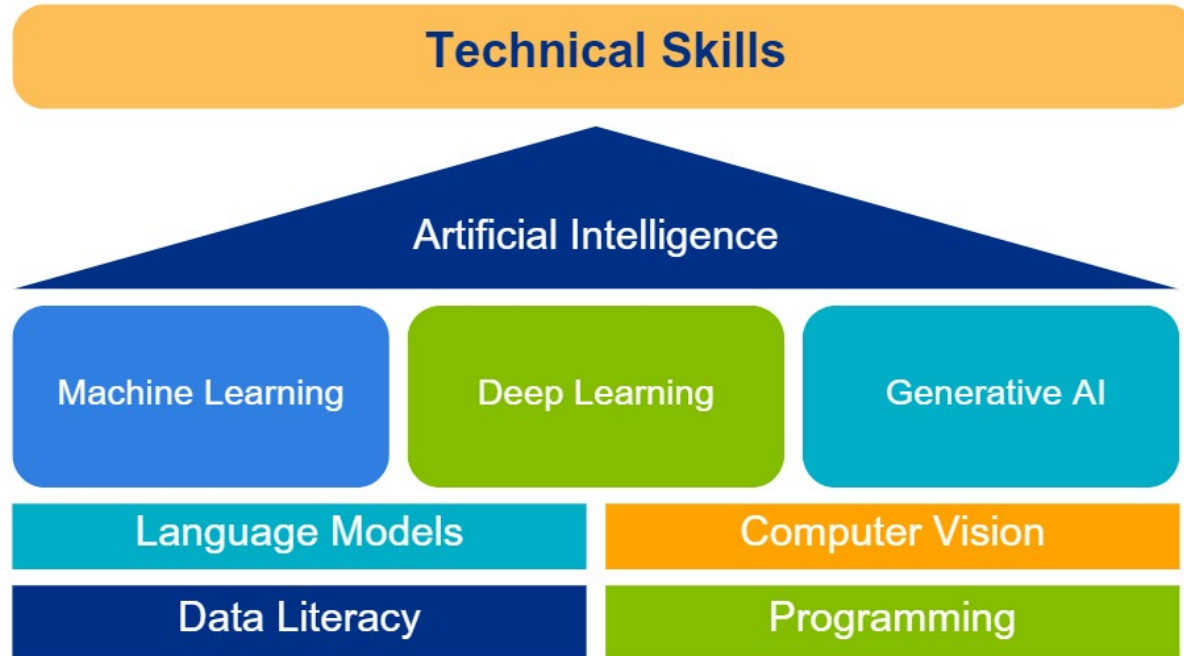
Language Models –

Understanding how computers use algorithms in natural language processing to analyze, generate and comprehend human language, enabling tasks such as translation, text generation and conversational AI.

Computer Vision –

Understanding how computers use algorithms and neural networks to interpret and analyze visual information from the world, enabling tasks such as image recognition, object detection and scene understanding.

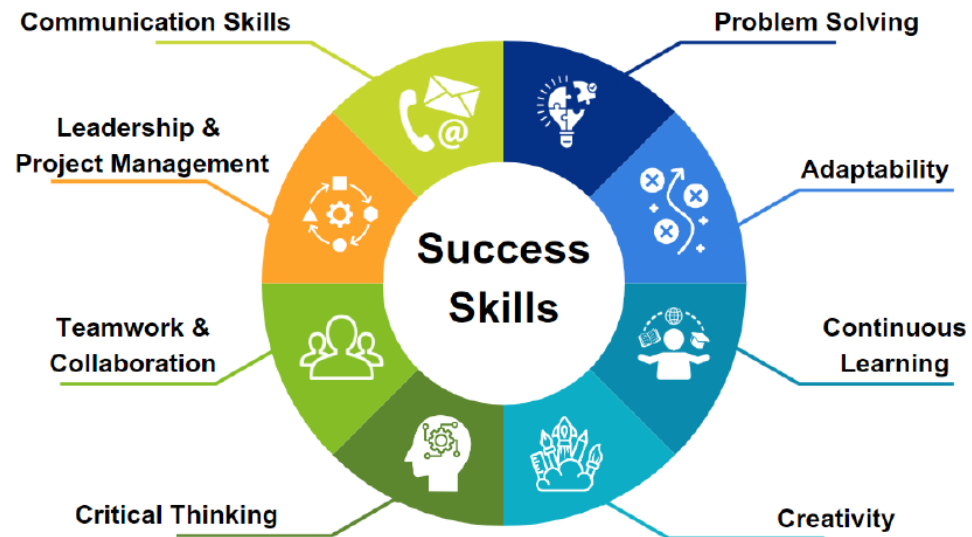
Unpacking One Skill Group



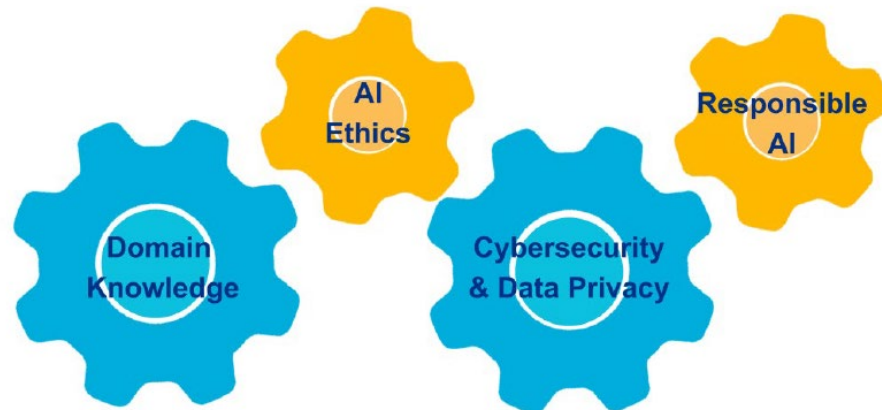
As we review the Technical Skills Group:

- Reflect upon current systems in your state that can be used to support skill development.
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Table Discussion: Review the Other Skill Groups



Industry Baseline Skills



As a table team, scan your assigned skill group:

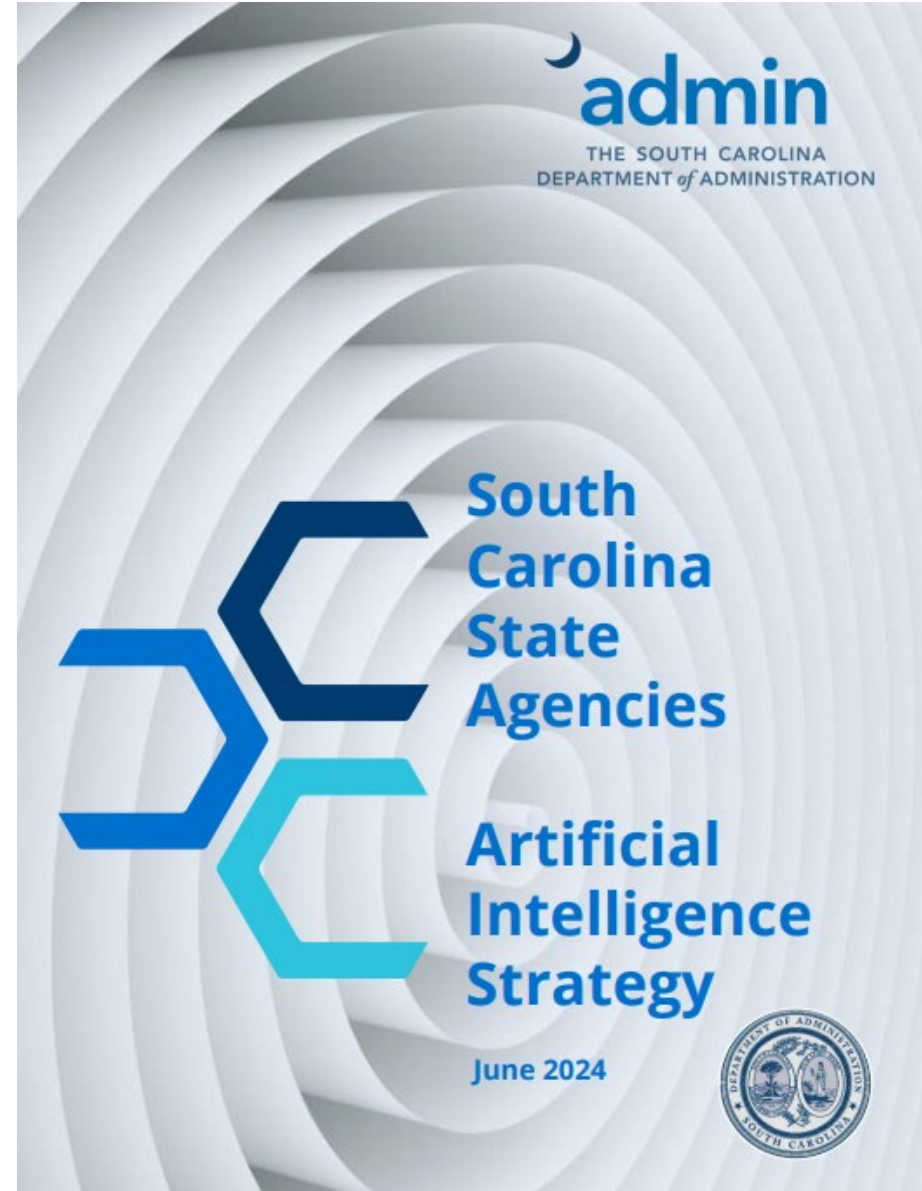
- Reflect upon current systems in your state that can be used to support skill development.
- Identify options to provide educator support.

South Carolina's AI Strategy

Vision Statement



South Carolina state agencies will responsibly harness the power and potential of AI to drive an era of greater prosperity for all citizens.



AI Cornerstones

South Carolina state agencies will identify and operationalize AI technologies to benefit its citizens and workforce.



South Carolina state agencies will create an environment to embrace the power of AI safely and securely.



South Carolina state agencies will assist in identifying AI training and educational opportunities that will be beneficial to the state.

AI Guiding Principles underpin every area of the strategy, from Vision to Near-term Actions.

Vision Statement sets the overarching course for the long-term goals and focus areas and remains stable over time.

Cornerstones provide clear direction to inform the actionable steps to achieve the strategy's goals and intended outcomes and remains stable.



Long-term Goals describe what South Carolina state agencies will accomplish within each Cornerstone of their Vision over time and progress toward achieving the Vision. These remain stable over time.



Near-term Focus Areas guide resource allocation over the next 12-24 months to accomplish the Long-term Goals and inform metrics to track progress toward those goals. The state will update these to account for the rapid pace of innovation and the maturity of South Carolina Government's AI capabilities.



Near-term Actions are the assignable tasks to achieve the Near-term Focus Areas. The state will update these to account for the rapid pace of innovation and the maturity of South Carolina state agencies' AI capabilities.

Supporting AI-Skill Development

South Carolina state agencies will identify and operationalize AI technologies to benefit its citizens and workforce.



South Carolina state agencies will create an environment to embrace the power of AI safely and securely.

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AI-Policy Draft Considerations

Integrate AI Knowledge & Skills

Provide Professional Development for Educators

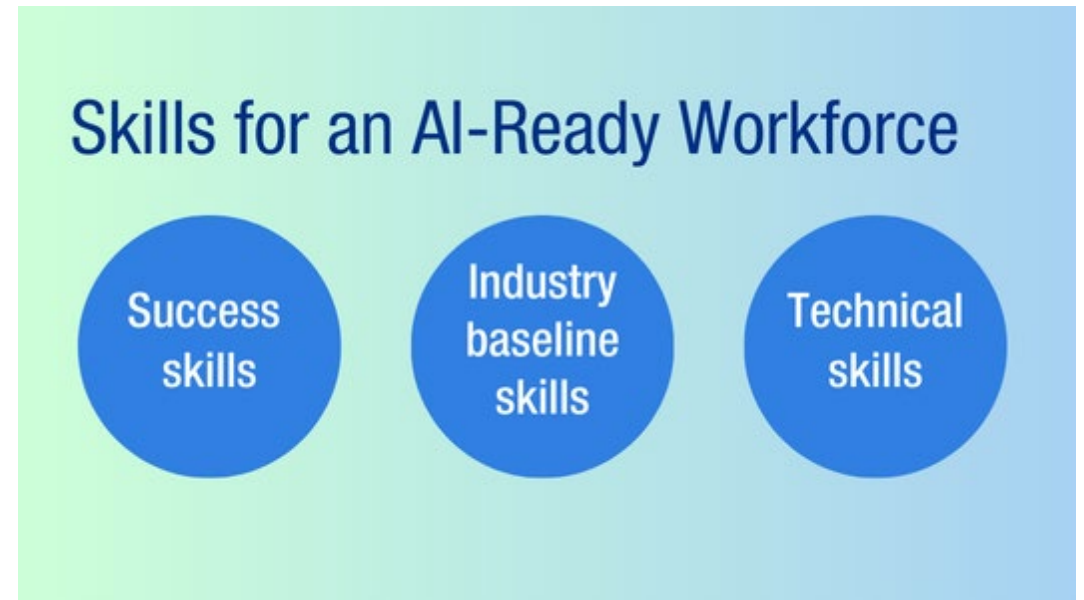
Establish State-Wide AI Networks

Develop and Administer AI Needs Assessments

Gathering Your Feedback

Policy Recommendation #1

Integrate the AI knowledge and skills students will need into the state K-12 standards and curricula to ensure they are prepared to be successful in the workforce.



Gathering Your Feedback

Policy Recommendation #2

Require role appropriate high-quality professional development for all current teachers, administrators, postsecondary faculty and preservice preparation for prospective teachers and faculty to ensure the successful integration of AI knowledge and skills into daily teaching practices into every discipline.



Gathering Your Feedback

Policy Recommendation #3

Establish a statewide artificial intelligence network so people, groups, and agencies can connect, communicate, collaborate and coordinate AI efforts across each state. This will help ensure state efforts are successful and sustained over time. A regional group of statewide network representatives could then gather regularly to share successes and challenges to inform and support each other over time.

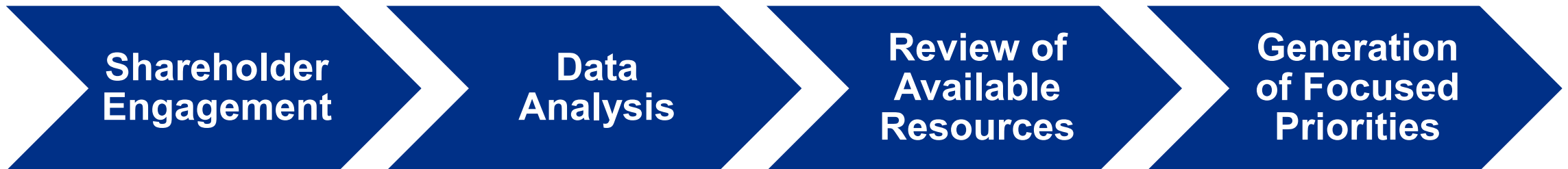


Gathering Your Feedback

Policy Recommendation #4

Develop and administer state-level AI needs assessments to determine the capacity of local districts, schools and institutions of higher education to integrate AI successfully.

The needs assessments should be designed to help states determine if any institution needs state support, what type of support and the level of support.



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SREB

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