



Artificial Intelligence for K-12 Educators

<p>GRADE LEVELS: K-12</p> <p>Educational Setting: Both in school and out of school</p> <p>Award Provides:</p> <ul style="list-style-type: none">● One 8-hr in-person PD (required)● Three 2-hr synchronous virtual sessions● Six 1-hr asynchronous virtual modules● (Awardees must attend the initial in-person PD + at least 7 hours of virtual sessions to receive credit and stipend)● Book: Machine Learning for Kids: A Project-Based Introduction to Artificial Intelligence● Access to numerous online resources and lessons to teach about Artificial Intelligence and Machine Learning. <p>Additional Cost(s) to Awardee in 2024-2025:</p> <ul style="list-style-type: none">● None <p>Approximate Sustainability Cost After Award Period:</p> <ul style="list-style-type: none">● None	<p>2024-2025 STEM Scale-Up Program Summary:</p> <p>NewBoCo’s tech education programming focuses on giving Iowans access to education that supports STEM skills while fostering creativity and excitement for the subject. We’ve taken great strides in Iowa over the last 7 years to increase access to computer science education.</p> <p>Working with educators across Iowa, we noticed an additional need for professional development on Artificial Intelligence (AI) and Machine Learning (ML) technologies. As these technologies are entwined with our daily lives, they have become an essential part of computer science education.</p> <p>To address this, we collaborated with MindSpark Education and the University of Maryland to design a professional development series that provides educators with a high-level understanding of how AI and ML impact our society and tangible resources and activities they could use to support teaching these concepts in the classroom.</p> <p>K–12 participants will experience activities and modules around perception, natural interaction, and the societal impact of AI. They will create a lesson plan to share with the cohort and receive other lesson plans generated by their peers to help take what they learned back to their educational environments.</p> <p>Learning will happen during a 1-day, in-person workshop; virtual, asynchronous modules; and three virtual, synchronous sessions that culminate in the sharing of lesson plans. Participants can earn 1 teacher relicensure credit, 1 Continuing Education Unit (CEU), or 15 DHS Clock Hours.</p> <p>Join us on January 31st at 4pm for a virtual information session. Register here.</p> <p>Requirements to Implement the Program:</p> <ol style="list-style-type: none">1.) Educator(s) must attend the initial 8-hour in-person professional development.2.) Educator(s) must participate in the STEM Council Scale-Up Educator Survey.
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Website:

<https://newbo.co/education/educators/ai-professional-development/>

Social Media:

- twitter.com/NewBoCo

Informational Webinar(s):

January 31st, 4pm

[Register here](#)

Iowa Standards Alignment:

- K-2 and 3-5: Lessons support a developmentally appropriate understanding of artificial intelligence. Students learn how AI is not magic through lessons that provide real-world examples of how we collect and organize data. The lessons allow students to use standards: 21.K-2.TL.1, 21.K-2.TL.2, and CSTA 1B-NI-05.
- 6-8: Students develop models, test, and discuss unintended logistical/ethical consequences if they were to be used at a larger scale (e.g. if they created a way to test for damaged products on a manufacturing line, but the error rates caused accidental waste products because the model didn't account for a detail, what would the impacts be on a company?). This connects to the standard: 21.6-8.TL.5.
- 9-12: Students combine skills they learned in earlier grades to work in groups, develop models, analyze potential consequences, and implement an AI model. This project would align with standards: 21.9-12.TL.1 and 3B-AP-08. Their AI model can also include a game that uses an AI algorithm to play against a human opponent (3B-AP-09).

Professional Development:**Duration:**

- One 8-hr in-person PD (required)
- Three 2-hr synchronous virtual sessions
- Six 1-hr asynchronous virtual sessions
- (Awardees must attend the initial in-person PD + at least 7 hours of virtual sessions to receive credit and stipend)

Date(s):

- In-person workshops will be scheduled during the weeks of July 29th and August 5th.
- Virtual learning sessions will be scheduled for late fall/winter 2024

Location:

- We plan to offer at least one in-person workshop in each STEM region pending demand.

STEM Scale-Up Program Application Link: www.iowaSTEM.org/Scale-Up-Application