

2023 IMPACT REPORT



Plif RAISE

In collaboration with *i2LEARNING*



Imagine a classroom of school children dedicating part of their school day to learn from their teachers about artificial intelligence (AI) – not only the technology, but its applications, career paths, how it influences society, and its implications for digital citizenship and its responsible design and use. The teacher, with little previous experience in computers or programming, confidently introduces their students to how AI is shaping today's world through examples that students can relate to, hands-on exercises, engaging class discussions, videos, and regionally/culturally adaptive lessons. Now multiply that one classroom by thousands across the world!

This was the scene at the second annual <u>Day of Al</u> held for global sharing and engagement on May 18, 2023. In over 110 countries, 7,512 teachers ranging from large public classrooms in major cities to homeschooled children in rural communities. Educators are encouraged to teach the curriculum year round.

Developed by MIT RAISE (Responsible AI for Social Empowerment and Education) researchers, Day of AI is a novel, low-barrier, high-impact short curriculum offered free of charge to K-12 students and their teachers. AI is for everyone, impacting our personal and professional lives, which is why we encourage teachers and students across all grades to utilize our materials to educate for the growing use of AI.

We are grateful to the community of educators, students, staff, and supporters who helped make this transformative day possible.



Curriculum

The <u>Day of Al curriculum</u>, developed by MIT RAISE, is free to use, customize, and redistribute under the <u>Creative Commons CC BY-NC-SA 4.0 license</u>. The activities are designed to be student-relatable and hands-on and to inspire multidisciplinary creative design, critical thinking, problem solving, and responsible-use learning.

It is currently offered in five grade bands – K-2, 3-5, 6-8 and two tracks for grades 9-12 (general and AP Computer Science) – and contains 4 to 8 hours of modular curriculum of both online and unplugged activities in 30-45-minute blocks that support teacher customization.

All tracks start with a professionally-produced video of AI researchers who help define what AI is in their own words and then are divided into grade bands and curricula. Each band allows for a deeper dive, focusing on a salient AI theme and its real-world use. For 2023 we have included seven new curriculum modules covering such topics as AI Policy, ChatGPT, AI Gaming, Data Science, Societal Impacts, and Voice AI.



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All curriculums include the Careers in Al module, including videos showcasing a diverse array of professionals with careers in Al . Interviewees span fields from climate science and consumer products to law and policy, insurance, and healthcare.

Our vision is to show the pervasiveness of AI in any industry, not just the tech-centric ones, and to show a diversity of professionals any student can relate to. The materials are adaptable for all teachers to implement, knowing that teachers ultimately have the best opportunity to assess which materials work for their classroom.

Over 7,500 teachers worldwide from 114 countries and all 50 U.S. states participated in the second Day of AI held by MIT RAISE and i2learning.

Recruitment & Participation

The Day of AI program was promoted through <u>social media</u> and professional educator networks worldwide with a focus on outreach to U.S Department of Education Title I schools¹ in the U.S. All teachers were invited to register, especially those without any background in STEM subjects or expertise in computer science.

Over 3,400 teachers in 50 U.S. states participated. Internationally, teachers from India (211), Canada (168), Vietnam (115) and Spain (83) represented the largest share of 114 countries participating. Thanks in large part to the translations from Fundación Cruzando in Chile, we had over 4,000 educators from Spanish speaking countries as well. **Based on the teacher's self-reported registration data, Day of AI reached over 500,000 students worldwide.** Although we don't have an exact count of the number of students who participated, we anticipate our reach nearly doubled that of year one!



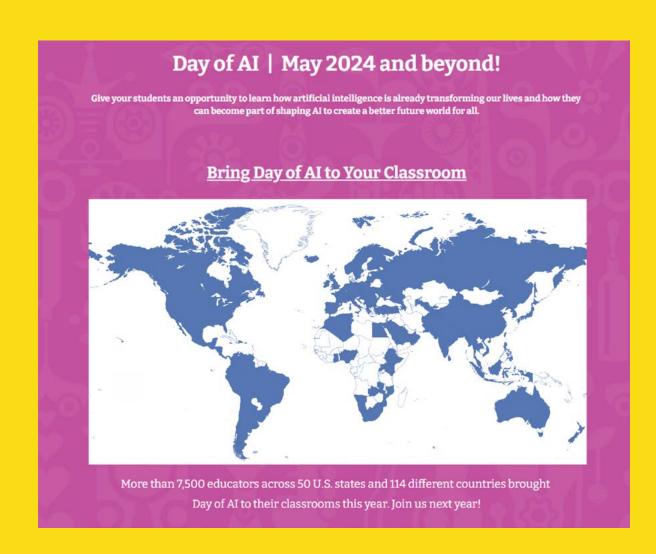
Registration for Day of AI by U.S. state in 2023, including both educators and parents.







Social media efforts included a YouTube video about the day along with promotion on Twitter, Facebook, LinkedIn and Instagram.





This experience made Al real by introducing it not just as a topic but as a potential career path where students can "make the world a better place." It embodies how education should be. Students are able to connect the dots between the information they received because there was an immediate "hands-on" opportunity to apply the learning.

Valerie Assamoi, Boston Public School Teacher on i2learning training



The Boston event on May 18, hosted by the Edward M. Kennedy Institute for the U.S. Senate, included students from Warren Prescott Middle School and New Mission High School for a human rights and data policy-focused event that was streamed worldwide.

Professional Development

Our collaborators from i2learning (a not-for-profit educational organization providing project-based STEM curriculum) provided teacher logistical support and ran free online professional development sessions for them. In response to feedback from the previous year's program, training videos were created for all curricula, enabling teachers to be trained asynchronously, at times and paces that worked best for them. Online training sessions were held in the United States, Australia, India, Hong Kong, Uruguay, Pakistan, and the Philippines. Through our surveys, we found that teacher interest was high and fairly uniform across all five grade band curriculums.

DAY OF AI MAIN EVENT

MIT RAISE celebrated the second Day of AI with two flagship local events. The Edward M. Kennedy Institute for the U.S. Senate in Boston hosted a human rights and data policy-focused event streamed worldwide. MIT RAISE and <u>Amazon Future Engineer</u> co-organized a student workshop at Dearborn STEM Academy in Roxbury, Massachusetts. This was also the second Day of AI Australia, hosted on May 18th. Fundación Cruzando in Chile has graciously provided a translated version of the Day of AI curriculum for Spanish speakers this year as well.

"Because AI is such a powerful new technology, in order for it to work well in society, it really needs some rules," said MIT President Sally Kornbluth. Prof. Cynthia Breazeal, MIT's dean of digital learning, added: "We want students to be informed, responsible users and informed, responsible designers of these technologies."

Adam L'Italien, chief innovation officer at Liberty Mutual Insurance (one of Day of Al's founding sponsors), compared the present moment with Al technologies to the early days of personal computers and internet connection. "Exposure to emerging technologies can accelerate progress in the world and in your own lives," L'Italien said, while recognizing that the Al development process needs to be inclusive and must mitigate biases.

From the Boston Mayor's Office of New Urban Mechanics, Technologist for the Public Realm Yo Deshpande, and Program Director Michael Lawrence Evans shared how Boston thinks about using Al to improve city life in ways that are "equitable, accessible, and delightful." Deshpande said, "We have the opportunity to explore not only how Al works, but how using Al can line up with our values, the way we want to be in the world, and the way we want to be in our community."





Prof. Cynthia Breazeal, Director of MIT RAISE, welcomes everyone in-person and online to the second annual Day of AI event.

Human Rights Policies for Artificial Intelligence

How does society address human rights concerns about AI? Marc Aidinoff, Ph.D. '21, former White House Office of Science and Technology Policy chief of staff, led a discussion on how government policy can influence how technology is developed and used, like the Blueprint for an AI Bill of Rights. "The work of building the world you want to see is far harder than building the technical AI system ... How do you work with other people and create a collective vision for what we want to do?"

Warren Prescott Middle School students described how AI could be used to solve problems humans couldn't. They also shared their concerns that AI could affect data privacy, learning deficits, social media addiction, job displacement, and propaganda. In a mock U.S. Senate trial co-designed by MIT Media Lab Ph.D. student Daniella DiPaola, the middle schoolers investigated what rights might be undermined by AI in schools, hospitals, law enforcement, and corporations. Meanwhile, New Mission High School students workshopped the ideas behind U.S. Senate bill S.2314, the Social Media Addiction Reduction Technology (SMART) Act, in an activity designed by Kennedy Institute staff. It was a culminating experience thinking about data and identity, following from students' work on the Data Science & Me curriculum designed by Raechel Walker, an MIT Media Lab Ph.D. student. They discussed what level of control could or should be introduced at the parental, educational, and governmental levels to reduce the risks of internet addiction. After the activities, students to voted on the laws they designed.



Al has the potential to do all kinds of fantastic things, including driving a car, helping us with the climate crisis, improving health care, and designing apps that we can't even imagine yet. But what we have to make sure it doesn't do is cause harm to individuals, to communities, to us—society as a whole.

Dr. Sally Kornbluth, MIT President



Students discuss the ethical impact of AI in the classroom and in their daily lives.



Edward M. Kennedy Institute for the U.S. S... @EMKInsti... - May 18 ... It was a pleasure to host @MIT President Sally Kornbluth and others from MIT @medialab to inspire Massachusetts students about the possibilities of AI and how it will shape their lives and future careers. #DayofAI





ADAI Circle @adai_circle · May 16

Under the program of RAICA (Responsible AI for Computational Action) developed by MIT RAISE, our students are equipped with skills in Chatbot and Natural Language Processing (NPL) which is also part of our mission to bridge the gap of AI to reach the unmet community.













Mrs Wallace @MrsWall08620646 · May 18

Some great discussions about the #DayofAI with my S1 and 2 classes at @GHSfalkirk . Really thoughtful insights from the students about the role and place of AI in society. Never underestimate them! #Alineducation





Impact School @ImpactSchoolLS · May 18

@ImpactSchoolLS brought #ArtificialIntelligence into our classrooms today to celebrate #DayOfAI. The program contained very thought provoking material.

@MitRaise @MIT @JenniferMarti26

#FutureMakers

#AlWeek

#MedusaSerpetineFTC12565





Misty Waldrop, NBCT @mwaldrop78 · May 17

Ss are combining their knowledge of AI and coding to create their own voice AI skill.

#DayofAI

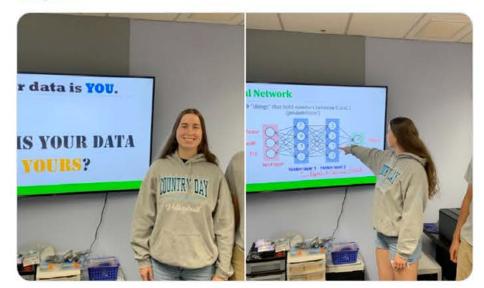
@wescullman @AlabamaTechie @MrsHworth3 @kkallhoff





CCDS Makerspace @CCDMakers · May 18

The release of Snapchat's MyAI prompted many student conversations about how Al works. Seniors Josh & Gracie worked w/ Ms. Back to inform students about data privacy & how AI works at an US assembly. Proactive response to important questions! @CountryDay #WeAreCountryDay #DayofAl





Amazon and MIT share a commitment to helping students discover a world of possibilities through STEM and AI education.

There's a lot of current excitement around the technological revolution with generative Al and large language models, so we're excited to help students explore careers of the future and navigate the pathways available to them.

Rohit Prasad Senior Vice President and Head Scientist Alexa at Amazon



Students learn about conversational AI at the joint Amazon Future Engineer and MIT RAISE Day of AI Event at Dearborn STEM Academy.

Research Findings

Our research team has recruited and engaged participating Day of AI teachers in a study to understand the impact of the Day of AI activities on educators' ability to deliver a compelling and meaningful educational experience to their students. We conducted both quantitative and qualitative research studies from a sample (N=190) of teachers across a variety of countries who registered for the Day of AI.

Survey respondents were in 38 countries with 68% based in the US. Their highest degrees were in a wide range of disciplines but the most frequently appearing were computer science, education, and technology. Two-thirds of the 190 implementers worked in government-funded schools, including 22 Title I Schools in the US.



Survey response by country represented on the map.

Respondents were generally more positive about their ability to contribute to shaping the future of AI literacy (i.e., people's ability to understand the role of AI in our lives, to evaluate its pros and cons, and to use it productively). 61% of implementers reported that their students felt they can contribute a lot or to some extent to shaping the future of AI and 77% reported that this sentiment increased as students learned more about AI. One implementer explained, "Students are understanding how AI is being used and created and they are understanding that they can become programmers and creators of this technology and not just passive users of it." Others noted that understanding how their data are used gave students a sense of control over AI's future.

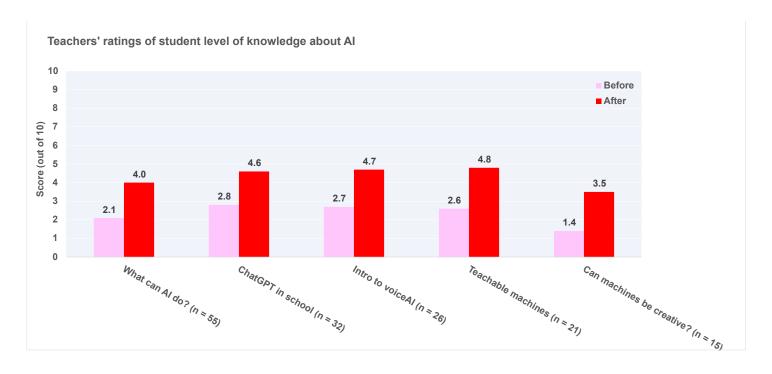
While the study is purely descriptive and self-reported, it provides a promising indication that our short-format AI literacy curricula can reach a wide audience and improve knowledge, awareness, and optimism about AI's role in students' lives and their ability to influence it. Future studies could include student-level data and could include pre- and post-assessments of AI concepts to more rigorously evaluate impact.



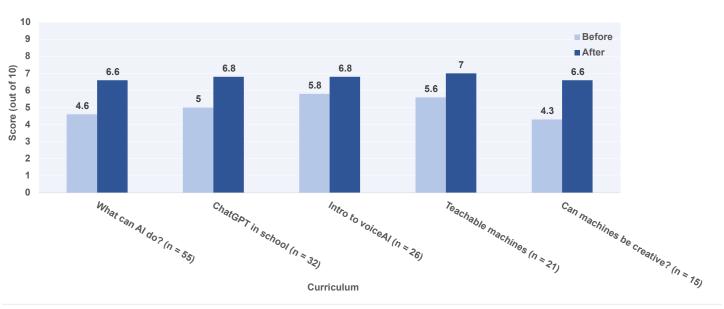
The curriculum helped me to understand the importance of using AI in a way that is beneficial to society and community and respects human rights. The curriculum gave me hope for the future of AI. I learned about the many challenges that AI faces, but I also learned about the potential of AI to solve some of the world's most pressing problems.

Participating Teacher from Singapore

All survey respondents were asked to indicate their students' level of knowledge about Al and certain Al functions (top figure). The curriculum helped increase knowledge across all fields following their use of the Day of Al curriculum. The level of engagement and increased knowledge show promising gains, which we anticipate building upon as we modify and improve the curriculum. We also saw an increase in student optimism about the use of Al (bottom figure). We are confident moving forward that we can increase the level of comfort for students and educators with using Al.



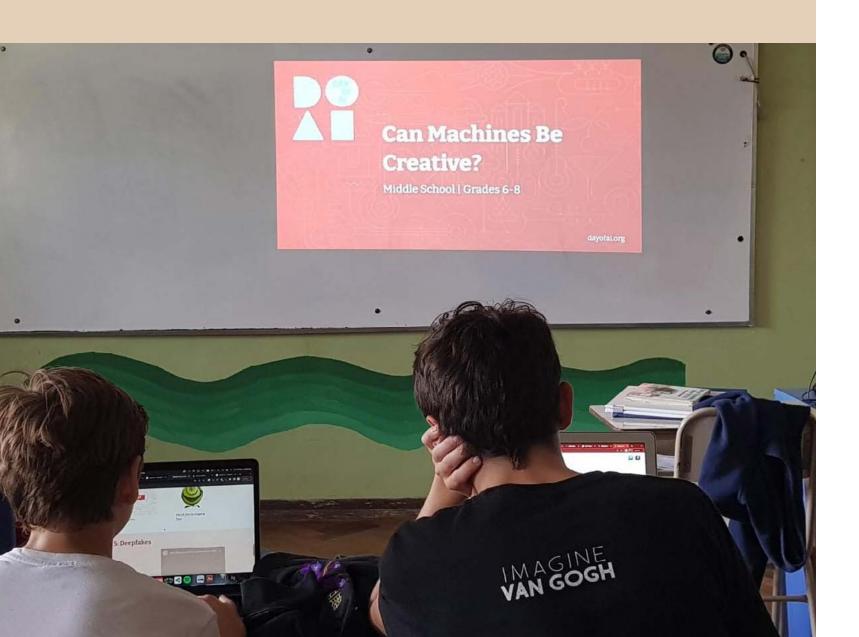






"Exposure to emerging technologies can accelerate progress in the world and in your own lives."

Adam L'Italien, chief innovation officer at Liberty Mutual Insurance (Day of AI founding sponsor)



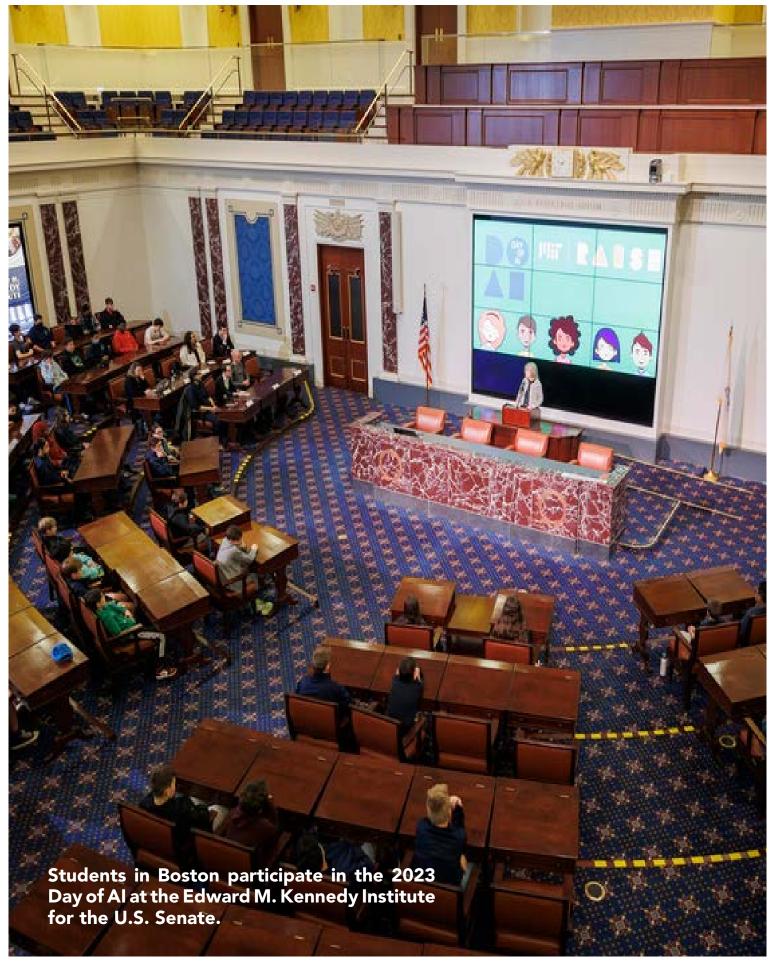
Growing a Global Day of Al Network

We will continue to seek greater support and engagement from industry, government, or non-profit collaborators who are interested in sponsoring the Day of AI in their country, state, province or region - providing assistance in advertising the Day of AI to schools, providing professional development, translating materials, and contributing to our curriculum (such as the Careers in Al module). MIT RAISE reserves the right to the Day of Al trademark and to decide the criteria in permitting organizations requesting to use the Day of Al name. Typically, these criteria include alignment with our educational mission, marketing budget and reach, sufficient staffing, and large event planning experience. We have recently added Day of Al Philippines (Unilab Foundation, Inc.) and Day of Al India (Coding and More, Commonwealth Educational Media Centre for Asia (CEMCA) to a growing list of collaborating countries which already includes Day of Al Australia. We have also recently collaborated with Fundación Cruzando in Chile who have produced Spanish translations of the Day of AI curriculum for Spanish speaking educators and students. Our latest collaboration has come through our work with the Organization of Ibero-American States for Education, Science and Culture (OEI), expanding our curriculum to meet the learning goals of the Ibero American region. Finally, our team has been in contact to grow our program within school districts in New York City and beyond.

Next Steps

Following the strong global interest in the Day of AI, MIT RAISE is coalescing a global community of organizations, education leaders, teachers, and other educators into an educator-led network to promote and share novel ideas about teaching AI literacy and provide peer-to-peer guidance, create new pedagogy for AI literacy, and improve what MIT RAISE provides. We invite educational collaborators to help support global expansion of Day of AI by helping to translate our modules into additional languages and localize our curriculum to contain culturally and geographically relevant examples.

Please contact raise-info@mit.edu for more information.



Acknowledgements

We would like to thank all of our 2023 Day of AI sponsors who have been of such tremendous support over these last two years and we look forward to continuing to collaborate and grow with you all on this exciting and important project. The Day of AI was made possible at no cost to educators or schools through the generous support of the following sponsors:











About MIT RAISE

MIT RAISE (Responsible AI for Social Empowerment and Education) is an MIT initiative to innovate learning and education in the era of AI. As computers continue to automate more routine tasks, AI education is a key enabler to future opportunities where success depends increasingly on intellect, creativity, empathy, and having the right skills and knowledge. In the face of this accelerating, AI-powered change to people's personal and professional lives, the RAISE research, outreach, and impact mission is to advance equity in learning, education and computational action to rethink and innovate how to holistically and equitably prepare diverse K-12 students, an inclusive workforce, and lifelong learners to be successful, responsible, and engaged in an increasingly AI-powered society.

Headquartered in the MIT Media Lab, RAISE is a collaboration with the MIT Schwarzman College of Computing and MIT Open Learning. As part of the RAISE research effort, faculty, staff and students from across MIT explore new pedagogical approaches, develop constructionist curriculum where students learn-by-making, creative innovative tools, advance the science of learning, as well as how AI can advance human learning. These advances are applied to RAISE outreach programs, designed to promote an AI literate society by engaging teachers and students in impact-driven learning from preK-12 to the workforce. The educational goals are to demystify AI and to enrich AI literacy for everyone by empowering learners of all ages to embrace AI technology creatively and to use it responsibly, equitably, and ethically. By doing so, we aspire for people to know how to use AI responsibly, have an informed voice to shape how AI is used in society, and to prepare a diverse and inclusive workforce that can design and apply AI responsibly to make a better world.

About i2Learning

i2Learning has been a champion of open source curriculum and education, making their contribution to the Day of AI extremely valuable. Over the past 10 years, i2 Learning has partnered with some of the leading STEM organizations in the world to develop project-based STEM curriculum for middle school students.

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