Contributing solutions to societal challenges

By harnessing the power of AI, we have an opportunity to help individuals, organizations, and governments solve some of society's most daunting problems. AI can help people collect, process, and analyze data, turning it into actionable insights that can accelerate advances in health and wellbeing, education, agriculture, and climate change mitigation. We invite all enterprises to consider making their AI-infused technologies widely available to improve the lives of people around the world. Contributing solutions to societal challenges

At Microsoft, we are working to empower those striving to solve humanitarian issues and create a more sustainable and accessible world with technology, resources, and expertise through our AI for Good initiative. We've committed $125 million over the next five years to provide financial grants, technology investments, and partnerships that combine our AI and data science experience with these individuals' and organizations' core expertise. AI for Good includes four programs: AI for Accessibility, AI for Earth, AI for Humanitarian Action and AI for Cultural Heritage, which are already supporting over 250 projects across the globe.

AI for Accessibility

AI can be a game-changer for people with disabilities. Intelligent solutions that enable people to leverage computers to see, hear, and reason are already impacting people's lives around the world. Currently, however, only one in ten people with disabilities have access to assistive technologies and solutions. Driven by our own principle of inclusiveness, we created AI for Accessibility, a $25 million commitment to placing AI tools in the hands of developers working to create accessible solutions for the 1 billion-plus people with disabilities around the world.

Over the last two decades, we have been working to foster communication and break down language barriers with Microsoft Translator. To help accurately translate more than 60 languages, it uses an advanced form of automatic speech recognition to convert raw spoken language into fluent punctuated text. To further explore this promising application, we partnered with the National Technical Institute for the Deaf (NTID) in New York to pilot the use of Microsoft Translator in classrooms. Combined with the American Sign Language translators, the captions provide another layer of communication to help the 1,500 students attending NTID learn. NTID students have also started using the Microsoft Translator app outside of class to help them communicate with hearing peers.

AI for Earth

We face a collective need for urgent action to address global climate issues. From conserving water to protecting biodiversity, we believe AI can help us better understand and address environmental issues. Our AI for Earth initiative has committed $50 million over the next five years to provide AI to those who are working to solve environmental issues in four key areas: climate, water, agriculture, and biodiversity.

One such project is called FarmBeats. We are working with farmers around the world to provide them with AI that can help them monitor the health of their farms in real time, enabling data-driven decisions that can help increase agricultural yield, lower costs, and reduce environmental impact. Even on farms without power or internet access, the FarmBeats program can use drones and low-cost sensors to capture data. The FarmBeats team can then apply

machine learning algorithms to integrate sensor data with aerial imagery from drones and other relevant data (such as weather, crop predictions, and best practices) to deliver actionable insights to farmers at a fraction of the cost of existing solutions. The Dancing Crow Farm in Carnation, Washington, has already lowered water input and increased yield using this program. With the world's population expected to grow by nearly 2.5 billion people over the next quarter century, AI solutions like FarmBeats offers significant opportunities to increase food production by improving agricultural yield and reducing waste.

AI for Humanitarian Action

With intelligent technology, we have a tremendous opportunity to impact how organizations anticipate, predict, and respond to pressing humanitarian crises. That's why we are committing $40 million over the next five years in our AI for Humanitarian Action initiative to expedite new AI solutions in four areas: disaster recovery, needs of children, refugees and displaced people, and human rights. By empowering global relief organizations with intelligent technology, we can help save more lives, alleviate suffering, and restore human dignity.

For more than six years, Microsoft has been partnering with Operation Smile to help them deliver the best possible care. Since its founding in 1982, the global nonprofit has provided free and safe surgeries in low- and middle-income countries for more than 270,000 children and young adults with cleft lip, cleft palate, and other facial deformities. Currently, Operation Smile uses a solution with SharePoint and Power BI that has streamlined workflows across the company and cut post-surgery evaluation time in half, from four to two months.

AI for Cultural Heritage

Technology has played a big role in accelerating globalization. While it's our business to advance technology, we also believe that technology should respect and even help protect the world's timeless values. That conviction has led us to add a fourth pillar to Microsoft's AI for Good portfolio – our five-year commitment to use artificial intelligence to tackle some of society's biggest challenges. This pillar is focused on AI for Cultural Heritage.

Our AI for Cultural Heritage program will incentivize the use of artificial intelligence by nonprofits, universities and governments around the world to help preserve the languages we speak, the places we live, and the artifacts we treasure. It will build on recent work we've pursued using various aspect of AI in each of these areas. For example, we have collaborated with The Metropolitan Museum of Art and MIT to explore ways in which AI can make The Met's Open Access collection accessible, discoverable and useful to the 3.9 billion internet-connected people worldwide.

Throughout each of our AI for Good programs, we have learned time and time again that by empowering organizations with intelligent technology, we can help transform lives and build a better world. As enterprises develop their own AI systems, it's important to recognize the benefit of these partnerships and collaborate with organizations who can use the technology to help solve some of society's biggest challenges.