The environmental paradox of AI

Artificial intelligence has become the novel of today's peace and conflict debates. It is a double-edged sword technology that saves and sabotages the world. It entails the force that is instrumental in mitigating environmental challenges, including improving weather forecasting, optimizing the resources used in agriculture, and identifying pollution sources with great accuracy. But the blessings of AI come in a suspicious guise, which consumes a large amount of energy for operationalization, emitting a significant amount of carbon emissions and drinking water at a considerable scale to cool down its systems, which pose existential threats to water-cursed countries such as Pakistan.

Environmental Conservation is changing due to artificial intelligence, which makes data-driven decisions faster. AI techniques can estimate population trends, identify species from camera trap photos, track ecosystems in real time, and spot disease early. These tools help conservationists anticipate the effects of climate change, create focused, long-term preservation plans, and better safeguard endangered species. AI-powered technologies monitor the condition of coral reefs, identify illicit fishing through satellite analysis, and follow marine creatures using acoustic data. These AI applications help the local people in coastal areas claim ownership of their sovereign resources.

AI helps promote community cooperation and lessen resource conflicts in contested areas, such as in remote regions of Pakistan, where war is being waged on the resource distribution, which goes beyond its positive environmental effects. Initiatives such as Wildlife Insights and Rainforest Connection equip local people with the means to observe and safeguard ecosystems, mitigate floods, and prepare measures before the catastrophe of floods, hurricanes, and blistering heat waves. AI enhances environmental diplomacy and resilience in vulnerable areas by encouraging cooperative conservation initiatives and harmonious cohabitation of humans and wildlife.

Where it becomes the savior of humanity and the environment, it also acts to dry out humans and the environment with its thirst. Artificial intelligence is rapidly depleting natural resources despite its potential to address climate change. 500 ml of pure water is used for cooling each time users engage with Chatgpt and similar systems. Water use in large data centres, which power AI worldwide, can reach 500,000 gallons daily. Hidden water demands like this might make it more difficult for millions of people to survive in a water-stressed nation like Pakistan, which is already dealing with record-breaking heat and impending scarcity.

According to researchers at the University of Massachusetts Amherst, a single AI model's training can release carbon emissions equal to the lifetime emissions of five typical American cars. As AI models get bigger and have billions of parameters, the energy cost of their inference phase accounts for roughly 90% of their overall energy use. AI growth risks worsening the climate concerns it seeks to address unless there are immediate changes toward renewable energy and more effective designs.

The vulnerable countries frequently bear a disproportionate amount of the environmental consequences. Pakistan is home to only 0.67% of the world's AI professionals, compared to 30% in North America. However, nations with weak water and energy systems, like Pakistan, may be

most affected by AI's unbridled resource needs.