CHIRP

CASE HOUSE OF IIM RAIPUR

CASE | 35 MINUTES READ | 20 PAGES

Brainy AI drains Aqua

RAHUL B HIREMATH[1]

[1] *Humanities and Liberal Arts Area, Indian Institute of Management Raipur, India*

Synopsis

This case's major focus is the challenge of reducing the water footprint associated with the development and use of Artificial Intelligence (AI) models. As AI becomes more commonplace, worries regarding the environmental effects of developing and utilising AI models have surfaced. The fact that data centres are essential to the development and application of AI models shows how closely related they are. In this case study, the connection between data centres' water footprint and AI is examined. It looks at how data centres affect the environment, especially in terms of water use. As the case investigates the water-intensive nature of AI-enhanced data centres, participants have the opportunity to assess and propose sustainable solutions to this challenge.

The case examines the usage of water by data centres in several businesses and raises concerns about possible adverse environmental repercussions. Members investigate how water-intensive ICT models are and offer green fixes to mitigate their consequences. The entire quantity of freshwater utilised in the production and consumption of products and services, or the water footprint, is something where learning happens. They look at how the whole water footprint is affected by the life cycles of AI models, which comprise data collection, algorithm training, deployment, and continuous operation. The case examines how much water data centres use. Members are prompted to consider the environmental effects of AI-integrated data centres' water-intensive nature by the case, which underlines the stress on local water supplies and the ethical and social repercussions for people and ecosystems that are touched by water shortages. Pupils are urged to propose sustainable strategies to reduce data centres' water footprints while maintaining their functioning and performance. They are asked to consider new developments in

technology, enhanced algorithms, reduced energy use, and alternate data centre locations with an abundance of water resources. The instance urges learners to look into cooperation between environmental experts, legislators, and AI developers in order to build sustainable AI development criteria. It emphasises preventative actions such as calculating water footprints and raising user awareness. Participants look at actual situations and discuss how much water data centres use. They get the information and skills required to propose workable water conservation solutions, and as a result, ethical conduct, environmental concerns, and technical advancement intersect to provide climate- and environment-friendly AI use. It emphasises preventative measures, such as quantifying water footprints and raising awareness among AI practitioners and consumers.

RELATED PRODUCTS

1) *Teaching Note*: Product Number- CHIRP-17956-TN