AI-Powered Water Resources Management: From Data to Impact

Why it matters – Hydrological extremes are intensifying while data and computing limits slow our response.

What we showed – The WISE-AI framework learns from sparse, human-shaped data to optimise reservoirs, predict levels, and foresee drought-crop impacts.

Result – Decisions > hours faster, < 2 % average error, reduced flood & drought risk.

Robot-style releases cut flood peaks, boost energy (Dominican Rep.)
–30 % peak flow

ConvLSTM nowcast water levels in complex canals (Florida)
< 2 % error

Rain-to-yield AI anticipates crop loss (Amazon / India)
Early alerts 3 mo

"Water is the driving force of all nature." – Leonardo da Vinci

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DEUTSCHE ZUSAMMENARBEIT

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