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IBM and NASA Create Open-Source Climate Foundation Model

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RECENT DEVELOPMENT

In an [announcement](#) made in early August, 2023, IBM announced the release of their joint project with NASA, watsonx.ai geospatial foundation model, as open-source on Hugging Face. The model, which is the largest of its kind available in the open-source AI development environment, is also described in the press release as the first open-source AI foundation model built in collaboration with NASA. As part of the Space Act Agreement with NASA, IBM began construction on the model earlier this year to address obstacles the aerospace association faces in analyzing tremendous and growing amounts of climate and geospatial data.

Sriram Raghavan, VP, IBM Research AI, believes open source efforts like this “...leverage the power of collaboration to implement faster and more impactful solutions... .” Jeff Boudier, head of product and growth at Hugging Face, and Kevin Murphy, Chief Science Data Officer at NASA, shared these sentiments, citing their belief that open-source contributions to scientific AI models like this act to enable collaboration, achieve faster and more valuable solutions, and ultimately allow the technology to benefit as many as possible. This project is also part of NASA’s Open-Source Science Initiative, which is aimed at building a more accessible, inclusive, and collaborative scientific community.

ANALYST COMMENT

For many wishing to leverage AI technology in their research or production, an AI foundation model is an easy, robust way to begin. These models, which come pre-trained on an initial non-domain specific corpus of data, can be acquired and trained on job-specific data. A recent Hyperion Research survey indicated that nearly 50% of HPC organizations employing large language models (LLMs) are using open-source models. With this project being just one in a slew from IBM’s holistic effort to create and train AI models that can be used for other applications and ultimately contribute to a body of applicable and, hopefully, re-applicable training scenarios, IBM is showing confidence in the ability of open-source contributors to use and grow new technology solutions.

The joint trust in open-source democratization demonstrated by IBM and NASA is not simply to share technology and spread its benefits. Free licensure opens the door for all user types and can easily result in new and unexpected technological developments. For a data hungry field full of novel applications, AI is uniquely suited for the optimization benefits of an open-source environment.

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