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DIGITAL STATES

Open source, open future:

Government and education embrace a better model for AI

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As public sector organizations explore how to adopt artificial intelligence, the challenges they face extend far beyond technical capabilities. Questions of trust, security and the ability to upskill teams are front and center. Increasingly, one answer is emerging: The future of AI is open source.

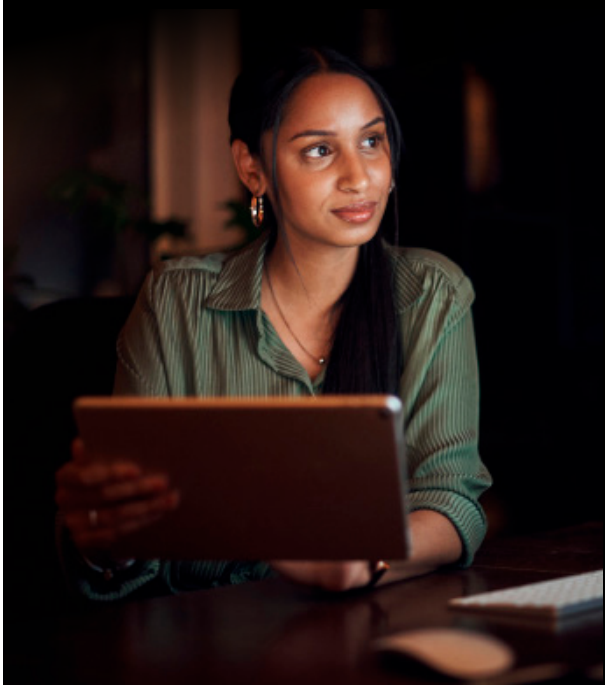
Open source models give government agencies and education institutions control over how AI systems are built and used. They also make technology more accessible.

“When everyone is working on and sharing AI technologies, it makes everything not only more trustworthy and secure but also more understandable,” says Damien Eversmann, chief architect for education at Red Hat. “It makes it easier for everyone to see what’s going on with those technologies.”

Government technology decisions are shaped by public accountability. Open source software allows government agencies and education institutions to show how solutions function while protecting constituent and student data.

An open source approach rests on three pillars:

1. Small models unlock adoption
2. Training unlocks business advantage
3. Choice unlocks innovation



Small models unlock adoption

Massive, resource-intensive AI models have captured headlines, but they aren’t always the right solution for public sector organizations. Smaller, specialized models offer simpler deployment, lower computational costs and broader hardware compatibility.

“The future is in smaller, specialized, faster and more efficient models to home in on the question you’re trying to answer,” says Eversmann.

That specialization becomes a force multiplier. The ability to reduce model size and computational costs without sacrificing accuracy allows governments to start running AI models internally using existing infrastructure. This means faster pilots and more opportunities to experiment and test without waiting for major upgrades.

To start learning how to use these technologies, organizations can look to open source models like IBM’s Granite large language models (LLMs), which are designed to run on a wide variety of hardware.

Training unlocks business advantage

One of the biggest barriers to AI use in the public sector is the cost and complexity of training generic models on specific internal business knowledge.

Many agencies need tailored solutions but are unable to make a huge investment in talent or infrastructure. There are solutions that address this reality. For example, Red Hat’s InstructLab project, created in collaboration with IBM and MIT, allows agencies to fine-tune models without needing a team of data scientists.

Francisco Ramirez, chief architect for state and local government at Red Hat, says employees from non-technical backgrounds have been able to contribute to model training using InstructLab.

“It doesn’t matter what your background is,” Ramirez says.

Intuitive tools also help staff more quickly understand the benefits of AI to their daily work.

Choice unlocks innovation

State and local agencies and education entities need flexibility when adopting AI.

Accelerators, GPUs, hyperscalers and data systems vary widely across government and education organizations. An open source approach takes these differences into account.

“The motto we’ve adopted is any model, any accelerator, any cloud,” says Eversmann. “AI should be able to be deployed anywhere, on premises, in your data center, in the cloud or even in an edge environment.”

This deployment flexibility allows organizations to experiment with AI in their current environments and reduces dependence on a single vendor. With an open source approach, government and education organizations can adapt more rapidly and drive innovation at scale.

Open source in today’s world

Governments worldwide are already seeing measurable improvements from open source adoption.

AI is now powering faster, more efficient public services for the government of Castilla-La Mancha in Spain. Junta de Comunidades de Castilla-La Mancha (JCCM) developed a generative AI-powered assistant that streamlines the review and resolution of environmental impact assessment processes. JCCM then deployed it securely in a private cloud.

JCCM decreased the time needed to process documents by two months and has seen improved constituent services and increased operational efficiency. JCCM also benefits from enhanced collaboration among IT teams and the ability to empower officials with agile and efficient tools.[1]

The California Healthcare Eligibility, Enrollment and Retention System (CalHEERS) — which supports nearly 18 million individuals accessing free or low-cost health insurance plans — migrated its legacy on-premises platform to the cloud and modernized the platform using microservices.

Using open source solutions, CalHEERS transferred 72 interfaces to a containerized environment within seven weeks. Looking ahead, the agency plans to introduce AI to help constituents select the right healthcare plan more quickly.[2]

Open source aligns with key government mandates and modernization efforts. For example, the U.S. Federal Source Code Policy enacted in 2016 encourages sharing and reuse of code across agencies to avoid duplication and promote transparency. U.S. federal agencies are also required to release at least 20% of new custom code as open source.[3]

In 2024, Congress enacted the Source Code Harmonization and Reuse in Information Technology Act (SHARE IT). The law builds on the original policy by formally requiring agencies to publicly list and share their custom-developed code in at least one public or private repository and ensure the code is accessible to federal employees.[4]

Conclusion: Open source, open future

Government and education seek technology solutions that solve real problems for the people they serve. Open source invites innovation by making AI more transparent, flexible and accessible to those who may not have specialized skills.

From Castilla-La Mancha to CalHEERS, early adopters are demonstrating that open source solutions can drive better outcomes without sacrificing control, overburdening budgets or jeopardizing public trust.

“Open source unlocks the world’s potential,” says Eversmann.

1. https://www.redhat.com/en/about/press-releases/government-castilla-la-mancha-and-red-hat-power-public-services-ai
2. https://www.redhat.com/en/success-stories/CalHEERS
3. https://digital.gov/resources/requirements-for-achieving-efficiency-transparency-and-innovation-through-reusable-and-open-source-software
4. https://www.congress.gov/bill/118th-congress/house-bill/9566/text

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