AI for the future of education

DeutschlandGPT runs BildungsLLM, a specialized educational product, on the Open Telekom Cloud

Reference project:

GPT

“The Open Telekom Cloud is the perfect operating platform for BildungsLLM. Its sovereign attributes satisfy our high demands for security and control, enabling us to offer our customers a complete package for modern education.”

Leonhard Benkert, CEO DeutschlandGPT

Germans have long recognized artificial intelligence (AI) as a key technology for the future. After all, one thing is certain—without AI, Germany runs the risk of falling behind the international competition. Despite this, one-third of companies in Germany intentionally avoid using AI – primarily due to concerns regarding data protection, data security, and data sovereignty. At the heart of this problem is that the leading AI providers are headquartered in the U.S. or China, and primarily process data on servers abroad, where sensitive information could be intercepted or stored and fall into the wrong hands. Still, many people use these solutions, because they promise significant improvements in productivity and efficiency.

DeutschlandGPT wants to position its AI solutions as an alternative to the established American and Chinese providers – artificial intelligence made in Germany, for Germany. The software company from Germering, just outside Munich, has specialized in developing a sovereign AI platform. “Our mission is to create secure, independent AI solutions that foster creativity, promote innovation, and offer long-term solutions to the challenges we currently face,” explains Leonhard Benkert, CEO of DeutschlandGPT.

The AI solutions by DeutschlandGPT ensure sovereignty, security, data protection, transparency, and competent support are all included – certified in accordance with ISO 27001 standard. The company’s AI products combine the performance of modern AI with the uncompromising protection of digital self-determination. They make AI trustworthy and sovereign. In addition to businesses, the company’s customers also include private individuals and the public sector.

The education system in Germany is undergoing rapid change: on the one hand, nearly every school is suffering from staff shortages, unfilled positions, and canceled classes; while on the other hand, requirements are constantly evolving. Teachers have to integrate new learning concepts and teach new skills, while also using modern media. The potential of artificial intelligence for the forward-looking evolution of education is evident: AI can provide uncomplicated support for classroom teaching and school projects, reducing teachers’ workloads. Students learn about the professional use of modern IT, which will benefit their further education or vocational training. With its current project, “BildungsLLM” (Bildung means education; LLM means large language model), DeutschlandGPT is going back to the roots of its parent company, Titanom, a software developer for the education sector. “Our goal is to merge our years of experience in education with our expertise in AI development, to provide a didactically high-quality language model to learners in Germany,” says Leonhard Benkert.

At a glance

- Novel LLM for school education in Germany
- Goal: faster go-live for the new service
- Meets the extensive regulatory requirements in the education sector
- Open Telekom Cloud as a sovereign operating platform
- Didactic, specific BildungsLLM runs in the AI Foundation Services
- Simple access via API and integration options for a variety of learning platforms
- “Guardian” features and anonymous use
- Full scalability and competitive, pay-as-you-go pricing model
- Sustainable operations
- Pioneer: an innovative tool for modern school education
- The leading sovereign European cloud is perfect for the legally compliant, scalable operation of AI services in the education sector

T Systems

Reference in detail

Customer pain points

Widely used LLMs such as GPT-4 are mature, accepted by the market, and often used for business applications. However, there are several obstacles to using them officially in schools. For instance, the solution must operate entirely within the EU. In addition, there must be transparency regarding how the provider of the model (the AI service) handles the entered data. This is not usually the case with publicly available American models; therefore, caution is advisable. Students' prompts could be saved outside Germany, potentially allowing individual tracking.

Secondly, simply answering questions does not meet the requirements of proper education. Schools need a didactic LLM that helps students develop solutions on their own and achieve their learning goals. It should support students in finding a solution instead of outputting finished answers—as it does in the business domain. Moreover, the underlying model must guarantee legal compliance for schools and offer "guardian" features that ensure prompts and outputs comply with ethical guidelines, security specifications, and content restrictions. Malicious and unwanted prompts must be blocked, and inappropriate answers filtered.

DeutschlandGPT also faced another important question: where should the finished model be run—legally watertight and sovereign—once it is complete? That's where Deutsche Telekom and its Open Telekom Cloud came into play.

How T-Systems solved it

In early 2025, DeutschlandGPT developed BildungsLLM, a specialized didactic model specifically designed for use in German schools. In addition to being tailored to the didactic requirements of education, it has also been optimized for the German language. It is based on an enhancement of the open-source Llama 3.3 70B model, which DeutschlandGPT trained by feeding its internal data, along with synthetic data, directly into the new model.

Interactions with BildungsLLM are not saved, ensuring the anonymity of students. Guardian features for ethical use have been integrated into the technical infrastructure. These guardian features are a key security element of the product. They form the first line of defense against improper and dangerous prompts, identifying potentially malicious content automatically and blocking it before it is processed. This not only safeguards the model, but also protects students from incorrect and inappropriate responses.

Since April 2025, the BildungsLLM has been part of the AI Foundation Services from the Open Telekom Cloud. The Open Telekom Cloud provides DeutschlandGPT and its customers with a secure, sovereign, and scalable operating environment in Deutsche Telekom's high security data centers in Magdeburg and Biere. Thus, the BildungsLLM satisfies all legal requirements. It can be easily integrated into existing learning platforms via an API, creating an ideal package for the next generation of reliable education.

Business impact

In the Open Telekom Cloud, DeutschlandGPT has the operating platform it needs to meet the demands of the AI provider and its customers in the education sector: far-reaching sovereignty, data privacy, security, and scalability. The cloud ensures a rapid rollout of the service in the German market. The pay-as-you-go billing model in the Open Telekom Cloud also supports DeutschlandGPT in expanding its business: costs grow in parallel with revenues. The independent software vendor (ISV) does not need to worry about infrastructure management tasks and can concentrate fully on enhancing and marketing its pioneering service.

Since it runs within Deutsche Telekom's sustainable data centers, the service's carbon footprint is minimized. The data centers run on 100 percent renewable energy sources and have received multiple awards for their sustainability, including the Platinum Award for green data centers. This means the AI model is also hosted in a sustainable manner.

BildungsLLM gives schools a tool that can raise education to a new level easily – legally watertight, compliant, and out-of-the-box, capturing the potential of AI for school education.

Contact
www.t-systems.com/email-us
00800 33 090300*
** from the following countries: Austria, Belgium, Denmark, France, Germany, Great Britain, Luxembourg, Netherlands, Norway, Poland, Portugal, South Africa, Spain, Sweden and Switzerland.*

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T-Systems International GmbH
Marketing
Hahnstraße 43d
60528 Frankfurt am Main
Germany

T Systems