HZD - AWS Use Case: The Teacher and Student Database (LUSD)

The Hessische Zentrale für Datenverarbeitung is the central IT service provider for the Hessian state administration in Germany. HZD has its headquarters in Wiesbaden and a branch office in Hünfeld. Its tasks include IT projects, IT procedures, IT procurement, contracting and IT communication services. The entity serves 135,000 users, including government agencies such as the police and judiciary, which require a particularly secure IT environment.

The teacher and student database (LUSD) is designed to provide quick answers to organizational questions in everyday school life and thus simplify processes. At the same time, the administrative workload is reduced. For a use case, questions and answers were stored in an Alexa Skill. tecRacer implemented the use case using individualized Alexa Skills and Amazon Echo.

Fast response to administrative queries at school

Teachers should be able to concentrate primarily on their pedagogical and didactic tasks. An IT communication service can help them quickly get information about the school organization and at the same time relieve the administrative workload at the school.

Teacher: "Alexa, open the teacher and student database."
Teacher: "Alexa, what do I have to do if I want to withdraw a
                 student from religious education?"

The answer will be read out. In addition, the corresponding program section for the question is shown directly on the Echo Show.

Implementation partner tecRacer is very familiar with the Amazon Web Service (AWS) construction kit

Creating this question-and-answer service via Alexa is not magic, but it does require the selection of the optimal suitable AWS services. Self-service is AWS's strength. Services can be configured on AWS via a graphical web interface. In addition, everything can also be programmed, which shows its strengths especially in the interaction of the services. However, it is easy to lose track of the various Amazon Web Services available. An experienced implementation partner like tecRacer enables the customer to select the optimal services from the large selection of AWS services, to assemble them according to the modular principle and to establish individualized standard modules.

For the use case teacher and student database (LUSD), tecRacer used Alexa Skills - everyday tasks are completed by interacting via voice. This is complemented by Amazon Echo, a voice-controlled, Internet-based intelligent personal assistant. It can access services from Amazon and from third-party providers.

However, voice user interfaces work differently than operating menus and must consider far more possibilities of the spoken language. First, the structure must be recognized. Even in one-question mode, customers use many variable expressions and synonyms: principal, director, boss, etc. The question-answer database can recognize variants of spoken language and learn from mistakes.

Outlook for additional use cases

Call center agents like those in the teacher and student database receive hundreds of customer inquiries every day. Assistive technologies can make their job much easier and speed up operations: During the call, the most important facts can be summarized in writing in real time and keywords can be highlighted. Amazon Connect makes this possible.

Amazon Connect is the intelligent, modular, cloud-based contact center solution of the next generation. With integrated NLP (Natural Language Processing) speech logic, the Amazon Connect database becomes a service hotline. It uses the same conversational logic. Questions learned from the Echo device are the basis for the phone hotline. Finally, the question "Is that enough?" is asked; if not, the system forwards to the hotline or triggers a callback. In the future, Amazon Connect will also be ideal for citizens' telephones or IT help desks, for example.

CUSTOMER: HESSISCHE ZENTRALE FÜR DATENVERARBEITUNG (HZD)

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"tecRacer is not only a very competent service provider, but also a partner that helps us solve our challenges and implement our services in a spirit of partnership."

Project goals
- Fast information on school organization
- Support for teachers and students
- Reduction of administrative workload in the school

Project deliveries tecRacer
- Amazon Echo Show
- Individualized Alexa Skills

About tecRacer

tecRacer, headquartered in Hanover and with locations in Duisburg, Frankfurt, Hamburg, Mannheim, Munich, Vienna, Lucerne, Geneva and Lisbon, offers Amazon Web Services Consulting (AWS) & Training Services from a single source - seamlessly integrated, across the entire cloud lifecycle - from strategy to implementation to operation.

The strategy also remains the clear focus on Amazon Web Services. Here, according to an independent study by Crisp Research, tecRacer is probably the most competent and important partner in Germany. And the focus on AWS proves tecRacer right: As part of the AWS Partner Summit 2021, tecRacer received the „AWS Consulting Partner of the Year" award. The owner-managed company, which was awarded as a Top Employer for medium-sized companies, now employs more than 150 permanent staff, has trained more than 12,000 participants in AWS and has already successfully implemented more than 250 AWS Consulting projects.

For more information, visit www.tecracer.com. Or contact us at aws-sales@tecracer.com