Smart Device Voice Assistants

AI-enabled Voice Assistant for smart devices, to understand and answer user questions in natural language

42MARU
SUCCESS STORY

CUSTOMERS

About LG Uplus Corp.

LG U+ is one of Korea's main telecommunication operators, with 14M customers worldwide. Recently launching the nation's largest LTE service, they are now leading the way with 5G technology.

CONSUMER INTERACTION
#b2c #speakers #watches

About Korea Telecom Corporation (KT)

KT is Korea's first and largest telecommunications network provider, offering a range of innovative consumer products including smart devices and wearables alongside commercial services.

CHALLENGES

LG U+ wanted to launch a smartwatch with voice capabilities to educate and entertain children. Based on a dataset taken from the internet that would expand in scope and learn new information about children's favourite characters over time.

KT is the market leader in smart speakers in Korea and required the capability to answer questions using public information for their users. This included general information about people, places and facts that could be found on open datasets including Wikipedia.

42MARU SOLUTION

1 Dataset sourced and constructed as *semantic triple* from Wikidata open datasets

2 Voice AI uses a combination of AI search engines to retrieve single answer to user question

3 ✓98.2% Finds a single correct answer with 98.2% accuracy

Combining multiple search systems allows for higher accuracy

APPLIED TECHNOLOGY

Semantic search seeks to improve search accuracy by understanding the user's intent instead of keyword matching alone. Topics and concepts can be linked and related information can be suggested.

Voice interactivity enables users to control devices using our voice. Integrate with smart devices such as speakers, wearable and entertainment systems to ask questions, search through a database and retrieve answers.

Natural Language Understanding tries to deduce what questions mean, regardless of the way they are expressed allowing users to interact with the computer using natural sentences.

QA uses a combination of language manipulation and search techniques to offer a direct answer to questions posed in a natural language. It can address Closed Domain (topic-specific) questions.

Paraphrasing refers to machine understanding of semantic peculiarities when using varied words to infer the same meaning. Different ways for formulating questions that have a single answer.

- Semantic
- Voice Enabled
- NLU
- Question Answer
- Para-phrasing

Unstructured data → Useful for business

www.42maru.ai

42MARU SOLUTION (CONT)

Handling questions about general knowledge in natural language requires a combination of search techniques to understand the question as best as possible and offer one correct answer.

The LG U+ Question Answering system for a children's smartwatch was added as a whitelabel voice capability, returning answers with an accuracy of 98.2%.

The KT Gigagenie smart speaker was equipped with 42Maru's QA capabilities by first sourcing the open datasets and creating a structured knowledge base to create answers from.

After preparing the datasets, 42Maru's engine was trained on the general knowledge within each wikipedia page and adapted to answer, regardless of how the question is asked.
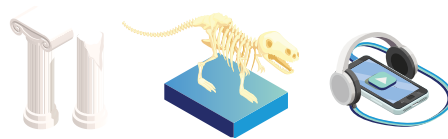
LG U+ Smart Kids offer immediate answers from weather, wikipedia, a dinosaurs and TV trivia.

KT smart speakers are leaders within the rapid adoption of voice AI in South Korea.

BENEFITS

Providers can specify new datasets to include in the service

Accurate answers increase product usage and satisfaction

>40% of smart speakers in Korea use our technology*

* based on KT smart speakers market share 2018

OTHER APPLICATIONS

Power your smart devices with a highly accurate question answering system.

Automotive
Create an in-car voice experience, allowing drivers to search through the owner's manual and receive answers to their questions/problems with their voice

Healthcare
Allow patients to ask questions about treatment plans, medication/product availability, general or personalised to their account

Consumer apps
Create voice enabled user-onboarding for your application, asking questions from the user and returning information that they need

LET'S CREATE YOUR VOICE AI CUSTOMER EXPERIENCE

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