Solution guide

Google Cloud

AI-enabled offline visual and audio translation

Many customers in regulated industries are forced to operate in offline environments due to strict data security and privacy requirements. As a result, these customers struggle with securely translating sensitive documents and communications while maintaining confidentiality.

Traditional on-premises tools frequently lack accuracy or advanced capabilities offered by modern optical character recognition (OCR) and speech-to-text technologies. This makes it difficult to process information efficiently for critical tasks.

Google Distributed Cloud (GDC) air-gapped brings the power of on-premises cloud computing with Google's artificial intelligence (AI) at the heart of it. The platform delivers a fully managed hardware and software stack, along with multiple solutions and use cases ready to fully utilize the platform and help customers to innovate and build future AI workloads at ease.

AI-enabled offline visual and audio translation solution

Our innovative solution leverages pre-trained machine learning models to deliver high-quality translation services to customers, ensuring scalability and efficiency. By harnessing the power of Google's extensive AI offerings, we are helping customers innovate faster by expanding the range of GDC air-gapped use cases.

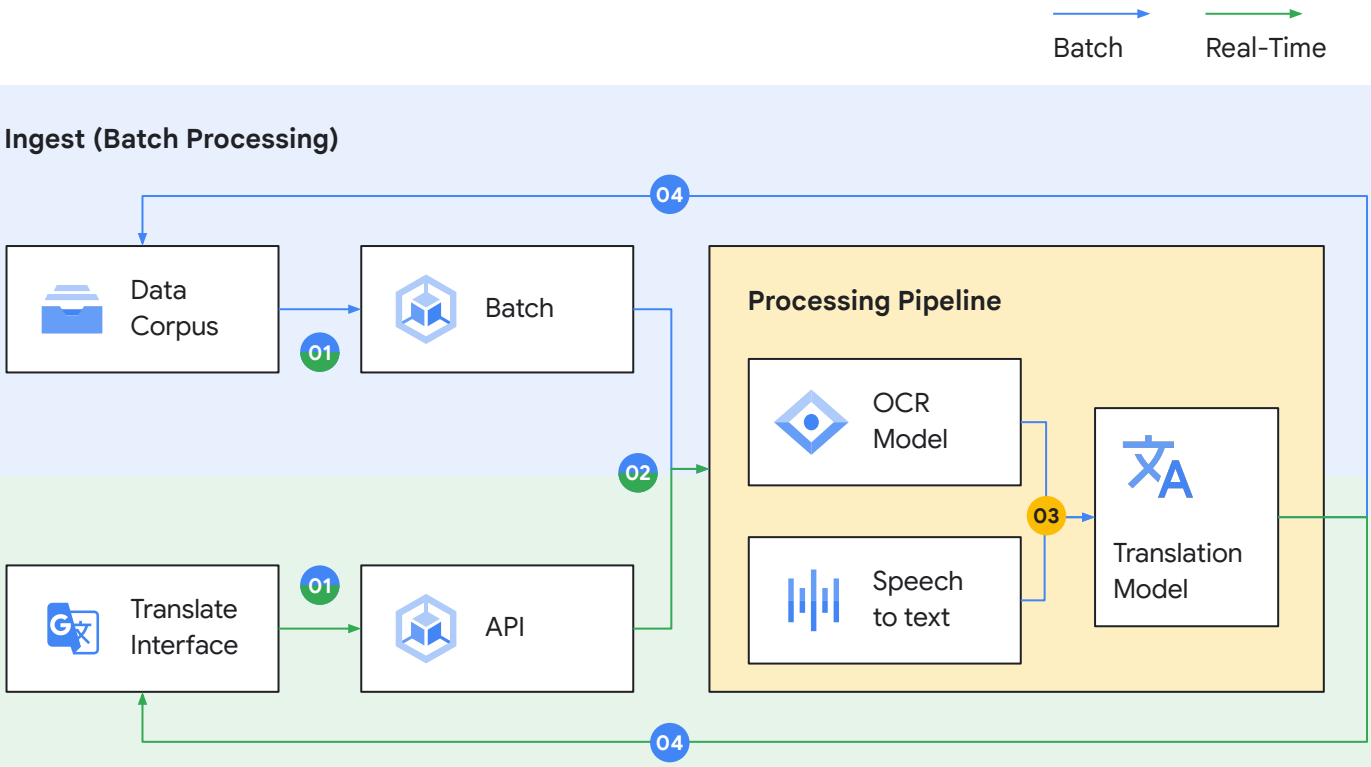
This solution enables customers and partners to use the latest OCR and speech-to-text technologies developed by Google in their applications while running in a fully disconnected environment.

The translation AI solution is built on the following fundamental principles:

Security: The solution prioritizes security by ensuring that all communication between its components is encrypted and governed by stringent authentication and authorization protocols based on GDC roles.

Reliability: We are committed to providing a highly reliable solution, backed by a 99.9% uptime guarantee, contingent on the support of infrastructure SLAs/SLOs.

Scalability: The solution is designed to accommodate the needs of our customers, scaling seamlessly from handling a single job to managing hundreds of parallel tasks.



01

The user selects an object storage bucket with source image, text, pdf and audio files for batch-translation, or uses the supplied interface and APIs for Real-Time translation.

02

All files are scheduled for translation.

03

The text is extracted from the input files and translated to the target language.

04

The translated text is written to the target bucket for batch requests and shown on the translate interface for real-time requests.

Capabilities

The solution encompasses a wide range of features and capabilities to cater to diverse translation requirements:

Live translation of text within images: Users can effortlessly upload image files (JPEG, PNG) via a web page, select input and output languages, and submit them for translation. The translated text is conveniently displayed within the user interface, with the option to download the results.

Live translation of audio files: Users can upload audio files, select input and output languages, and submit them for translation. The translated text is summarized within the UI, and users can choose to download the translated content.

Live translation of text within PDFs: The solution supports the translation of text within multi-page PDF documents. Users can upload PDFs, specify input and output languages, and initiate the translation process. A translation summary is presented within the UI, and users have the option to download the translated document.

Solution health monitoring: Application owners can gain insights into the solution's health by viewing metrics related to the number of jobs executed, successful or failed jobs, and execution time. The solution offers a predefined dashboard with relevant metrics and allows for generating reports based on specific time frames.

API integration: The solution offers API integration capabilities, enabling users to seamlessly incorporate the translation pipeline into their applications, processes, or workloads. This feature streamlines the translation workflow and enhances efficiency.

Alerting: Application owners can set up alerts based on chosen metric values, ensuring proactive monitoring and timely notifications. They also have the flexibility to remove or edit previously created alerts.

Batch files translation (from Google Cloud buckets): The solution facilitates batch translation by allowing users to select a folder from the Google Distributed Cloud air-gapped bucket and submit its contents for translation. Users can optionally choose the input language, content type (audio, image, PDF), output bucket folder, and output language. A translation summary is provided, and users can download the translated files.

To learn more and get access to this solution, please connect with your account team.