**Categories of Azure AI services**

Azure offers a number of AI services that can be grouped into categories based on their capabilities:

A close-up of a document

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**Available Azure AI services**

When building AI applications, use the following Azure AI services:

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[**Targeted language processing**](https://learn.microsoft.com/en-us/azure/architecture/data-guide/ai-services/targeted-language-processing)

The following services provide targeted language processing capabilities for Azure AI services:

* [Azure AI Language](https://learn.microsoft.com/en-us/azure/architecture/data-guide/ai-services/targeted-language-processing#azure-ai-language) provides natural language processing for text analysis.
  + **Use** the Azure AI Language service when you need to work with structured or unstructured documents for the wide array of language related tasks described.
  + **Don't use** Language service if you need to search documents with chat, check them for content safety, or translate them.
* [Azure AI Translator](https://learn.microsoft.com/en-us/azure/architecture/data-guide/ai-services/targeted-language-processing#azure-ai-translator) is a machine translation service. It can perform [real-time text translation](https://learn.microsoft.com/en-us/azure/ai-services/translator/text-translation-overview), batch and single file [document translation](https://learn.microsoft.com/en-us/azure/ai-services/translator/document-translation/overview), and [custom translations](https://learn.microsoft.com/en-us/azure/ai-services/translator/custom-translator/overview) that allow you to incorporate specialized terminology or industry-specific language for your scenario. It supports [many languages](https://learn.microsoft.com/en-us/azure/ai-services/translator/language-support).
  + **Use** Translator service when you need to perform translation specifically. While you could use other general purpose foundation language models to perform translation, using the translator for its specialized purpose can prove more reliably effective and can be more cost effective by using targeted translation models.
  + **Don't use** Translator service if you need engage with chat, to analyze content for sentiment, or for content moderation. For sentiment analysis, use the Language service instead. For content moderation, use the Content Safety service.
* [Azure AI Document Intelligence](https://learn.microsoft.com/en-us/azure/architecture/data-guide/ai-services/targeted-language-processing#azure-ai-document-intelligence) is a service that can convert images directly into electronic forms. You can specify expected fields and then searches images you provide to capture those fields without human intervention. The service hosts many prebuilt models, and also allows you to build custom form models of your own.
  + **Use** Document Intelligence service when you know exactly which fields you need to extract from scanned documents to fill electronic forms appropriately.
  + **Use** Document Intelligence to identify key structures (headers, footers, chapter breaks, and so on) in diverse document corpuses to further programmatically interact with the document, such as in a retrieval augmented generation (RAG) implementation.
  + **Don't use** Document Intelligence service as a real-time search API.

[**Speech recognition and generation**](https://learn.microsoft.com/en-us/azure/architecture/data-guide/ai-services/speech-recognition-generation)

The following Azure AI services can provide speech recognition and generation capabilities for your workload.

* [Azure AI Speech](https://learn.microsoft.com/en-us/azure/architecture/data-guide/ai-services/speech-recognition-generation#azure-ai-speech) provides natural language processing for text analysis.
  + **Use** Speech service when you need to transcribe or translate spoken speech, identify speakers in a conversation. You can also use the service as a lower cost alternative for natural sounding speech generation to the higher quality [Whisper](https://learn.microsoft.com/en-us/azure/ai-services/openai/concepts/models) in the OpenAI models.
  + **Don't use** Speech service for chat, content summarization, moderation, or guiding users through scripts. Use other models for those things instead.
* [Immersive Reader](https://learn.microsoft.com/en-us/azure/architecture/data-guide/ai-services/speech-recognition-generation#immersive-reader) is a tool that implements proven techniques to improve reading comprehension for emerging readers, language learners, and people with learning differences.
  + **Use** Immersive Reader to provide an improved readability experience tailored for language learners or people with learning differences.
  + **Don't use** Immersive Reader for traditional text to speech use cases.

[**Image and video processing guide**](https://learn.microsoft.com/en-us/azure/architecture/data-guide/ai-services/image-video-processing)

The following services provide video and image processing capabilities for Azure AI services:

* [Azure OpenAI](https://learn.microsoft.com/en-us/azure/architecture/data-guide/ai-services/image-video-processing#azure-openai)
  + **Use** Azure OpenAI for image generation from natural language using pre-trained generative imaging models. For example, on-demand generation of custom art.
  + **Use** Azure OpenAI when you need to perform non-specific, broad analysis on images. For example, generating accessibility descriptions.
  + **Don't use** Azure OpenAI if you want to use open source image generation models available in Azure Machine Learning.
  + **Don't use** Azure OpenAI if you need to perform specific types of image processing like forms extraction, face recognition, or domain-specialized image characteristic detection. For these scenarios, use or build AI solutions designed specifically trained for those purposes instead.
* [Azure AI Vision](https://learn.microsoft.com/en-us/azure/architecture/data-guide/ai-services/image-video-processing#azure-ai-vision)
  + **Use** Vision service when you need basic optical character recognition (OCR), image analysis, or basic video analysis to detect motion and other events.
  + **Don't use** the Vision service for analysis that large, multi-modal, foundation models already support.
  + **Don't use** the Vision service to moderate content. Use the Content Safety service instead.
* [Azure AI Custom Vision](https://learn.microsoft.com/en-us/azure/architecture/data-guide/ai-services/image-video-processing#azure-ai-custom-vision)
  + **Use** the service when you have specific requirements that the basic Vision service's image analysis can't provide. For example, it's good for recognizing unusual objects, manufacturing defects, or providing detailed custom classifications.
  + **Don't use** the service if you need basic object detection or face detection. Use Face or Vision services instead.
  + **Don't use** the service for basic visual analysis. Use vision capable models from Azure OpenAI or open-source models in Azure Machine Learning instead.
* [Azure AI Face](https://learn.microsoft.com/en-us/azure/architecture/data-guide/ai-services/image-video-processing#azure-ai-face)
  + **Use** Face service when you need to check whether faces are live or spoofed/faked, or to identify, group, or find similar faces.
  + **Don't use** Face service to detect emotions in faces or perform other high-level reasoning about faces. Use multi-modal language models for those tasks instead.
* [Azure AI Video Indexer](https://learn.microsoft.com/en-us/azure/architecture/data-guide/ai-services/image-video-processing#azure-ai-video-indexer)
  + **Use** Azure Video Indexer service for more advanced video analysis related tasks that the Vision service's basic video analysis can't provide.
  + **Don't use** Azure Video Indexer service for basic video analysis tasks like people counting and motion and event detection. The Vision service's basic video analysis is more cost effective for these tasks.

[**Azure AI Content Safety**](https://learn.microsoft.com/en-us/azure/ai-services/content-safety/)

The following are a few scenarios in which a software developer or team would require a content moderation service:

* User prompts submitted to a generative AI service.
* Content produced by generative AI models.
* Online marketplaces that moderate product catalogues and other user-generated content.
* Gaming companies that moderate user-generated game artifacts and chat rooms.
* Social messaging platforms that moderate images and text added by their users.
* Enterprise media companies that implement centralized moderation for their content.
* K-12 education solution providers filtering out content that is inappropriate for students and educators.

The following table describes the currently available APIs.

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[**Custom Machine Learning**](https://learn.microsoft.com/en-us/azure/machine-learning/overview-what-is-azure-machine-learning)

Azure Machine Learning is a cloud service for accelerating and managing the machine learning (ML) project lifecycle. ML professionals, data scientists, and engineers can use it in their day-to-day workflows to train and deploy models and manage machine learning operations (MLOps).

You can create a model in Machine Learning or use a model built from an open-source platform, such as PyTorch, TensorFlow, or scikit-learn. MLOps tools help you monitor, retrain, and redeploy models.