



Many artificial intelligence cloud platforms incorporate a series of Cognitive Services tools to assist Data Scientists and other Power Users to leverage complex algorithms when deploying AI solutions in organisations today. Sometimes these products are embedded in applications purchased off-the-shelf, and other times are components that can be utilised when developing basic spreadsheets, databases and apps by all levels of users.

Cognitive Services are generally exposed to users and developers via **Application Programming Interfaces** (API's). These provide a standardised way of accessing features required for intelligent applications without requiring direct knowledge of Artificial Intelligence (AI) or data science skills.

Cognitive services are designed to enable developers to build applications that include the ability to see, hear, speak, understand and reason.

There are many different types of APIs available, but all are focussed on bringing complex AI techniques to users without machine-learning experience, to enhance business operations.

Vision Speech	Language	Search	Decision
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Vision APIs

A collections of APIs are available to analyse image and video information. These include the ability to process images to return information or classify them into different categories.

Some specific solutions are also able to detect facial attributes including emotions, form recognition to process data on paper or electronic forms, and ink recognition to analyse shapes and handwritten information.

Speech APIs

Speech-enabling applications can be particularly useful in situations where users hands are

otherwise occupied or other input devices such as keyboards are not suitable.

In addition to having the ability to include speechenablement of applications, they can also identify individual speakers within a conversation.

Language APIs

These services are able to detect language, perform translation, extract key phrases and execute sentiment analysis.

Search APIs

In addition to bringing the world of internet search results to custom applications, search APIs are also able to perform contextual grammar and spell checking.

Decision APIs

Examples of Decision APIs include the ability to detect anomalies in time series data, monitor content for offensive, undesirable or risky content, as well as personalising content for users based on their real-time behaviour.