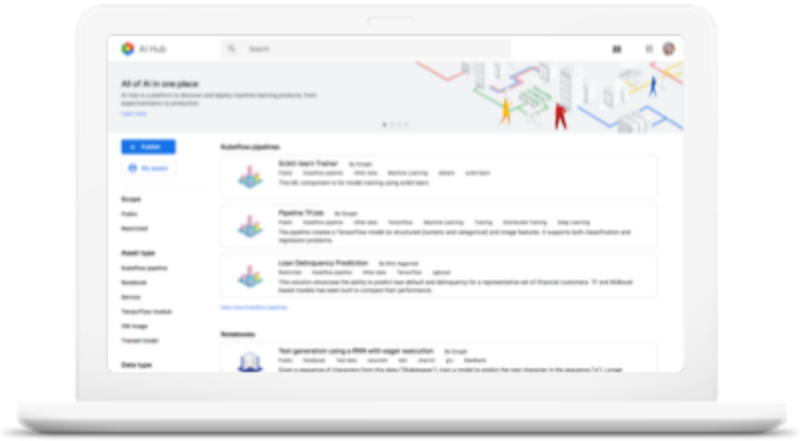
AI and machine learning products

Innovative machine learning products and services on a trusted platform.

Guides & resources (#more-ai-resources)

- **AI Hub**, our hosted repository of plug-and-play AI components, encourages experimentation and collaboration within your organization.
- **AI building blocks** make it easy for developers to add sight, language, conversation, and structured data to their applications.
- **AI Platform**, our code-based data science development environment, lets ML developers and data scientists quickly take projects from ideation to deployment.



AI Hub

Hosted repository of plug-and-play AI components

Google Cloud's AI Hub provides enterprise-grade sharing capabilities, including end-to-end AI pipelines and out-of-the-box algorithms, that let your organization privately host AI content to foster reuse and collaboration among internal developers and users. Enterprise users can find AI components built by other teams within an organization and access AI content published by Google AI, Google Cloud AI, and Google Cloud Partners. You can also easily deploy unique Google Cloud AI and Google AI technologies for experimentation and production on Google Cloud and hybrid infrastructures.

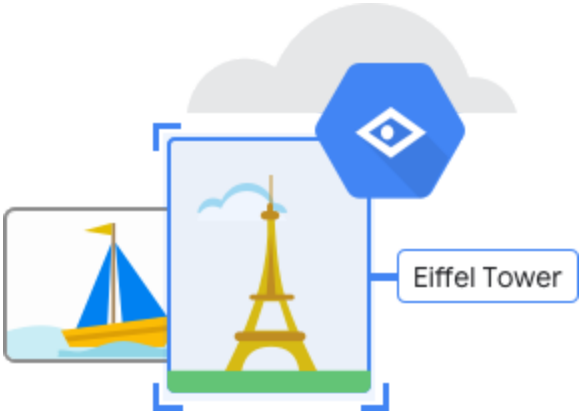
Learn more about AI Hub → (https://cloud.google.com/ai-hub/)

AI building blocks

Tools that make it easy for developers to add sight, language, conversation, and structured data to their applications.

Learn more about building blocks → (https://cloud.google.com/products/ai/building-blocks/)

SIGHT LANGUAGE CONVERSATION STRUCTURED DATA CLOUD AUTOML



Vision AI

Analyze images in the cloud or at the edge

Google offers two ways to gain insights into the wealth of knowledge hiding in your images. Our powerful pre-trained Vision API models quickly classify images into thousands of categories (such as “sailboat” or “Eiffel Tower”) and recognize individual objects, faces, and words. You can also use AutoML Vision to easily build and train custom models to meet your specific needs, even if you don’t have significant machine learning expertise.

Learn more → (https://cloud.google.com/vision/)

Video AI

Precise video analysis — down to the frame

These two fully featured AI products make your video library more searchable and valuable. Video Intelligence API's pre-trained models extract metadata, identify key nouns, and annotate video content. AutoML Video Intelligence lets you train custom models for projects that aren't covered by the pre-trained API. And try both products together for the most sophisticated results.

Learn more → (https://cloud.google.com/video-intelligence/)

AI Platform

This code-based data science development environment empowers machine learning developers, data scientists, and data engineers to take their projects from ideation to deployment, quickly and cost-effectively.

Learn about AI Platform → (https://cloud.google.com/ai-platform/)

AI Platform Notebooks

An enterprise notebook service to launch projects in minutes

AI Platform Notebooks is a managed service whose integrated JupyterLab environment makes it easy to create instances that come pre-installed with the latest data science and ML frameworks and integrate with BigQuery, Cloud Dataproc, and Cloud Dataflow for easy development and deployment.

Learn more → (https://cloud.google.com/ai-platform-notebooks/)

Deep Learning VM Image

Preconfigured virtual machines for deep learning applications

Deep Learning VM Image makes it easy and fast to provision a VM quickly and effortlessly, with everything you need to get your deep learning project started on Google Cloud. You can launch Compute Engine instances pre-installed with popular ML frameworks like TensorFlow, PyTorch, or scikit-learn, and add Cloud TPU and GPU support with a single click.

Learn more → (https://cloud.google.com/deep-learning-vm/)

Deep Learning Containers (beta)

Preconfigured and optimized containers for deep learning environments

Build your deep learning project quickly with a portable and consistent environment for developing, testing, and deploying your AI applications on Google Kubernetes Engine (GKE), AI Platform, Cloud Run, Compute Engine, Kubernetes, and Docker Swarm. Deep Learning Containers provide a consistent environment across Google Cloud services, making it easy to scale in the cloud or shift from on-premises.

Learn more → (https://cloud.google.com/ai-platform/deep-learning-containers/)

Data Labeling Service (beta)

Data preparation for machine learning model training

Use the AI Platform Data Labeling Service to request having human labelers label a collection of data that you plan to use to train a custom machine learning model. You can submit the representative samples to human labelers who annotate them with the "right answers" and return the dataset in a format suitable for training a machine learning model.

Learn more → (https://cloud.google.com/data-labeling/docs/)

AI Platform Training

Distributed training with automatic hyper parameter tuning

Use AI Platform to run your TensorFlow, scikit-learn, and XGBoost training applications in the cloud. You can also use custom containers to run training jobs with other machine learning frameworks.

Learn more → (https://cloud.google.com/ml-engine/docs/training-overview)

AI Platform Predictions

Model hosting service with serverless scaling

Host your trained machine learning models in the cloud and use AI Platform Prediction to infer target values for new data.

Learn more → (https://cloud.google.com/ml-engine/docs/prediction-overview)

Continuous Evaluation (beta)

Model optimization using ground truth labels

Sample the prediction from trained machine learning models that you have deployed to AI Platform and provide ground truth labels for your prediction input using the continuous evaluation capability. The Data Labeling Service compares your models' predictions with the ground truth labels to provide continual feedback on your model performance.

Learn more → (https://cloud.google.com/ml-engine/docs/continuous-evaluation/)

What-If Tool

Model evaluation and understanding using a code-free visual interface

Investigate model performances for a range of features in your dataset, optimization strategies, and even manipulations to individual datapoint values using the What-If Tool integrated with AI Platform.

Learn more → (https://cloud.google.com/blog/products/ai-machine-learning/introducing-the-what-if-tool-for-cloud-ai-platform-models)

Cloud TPU

Hardware designed for performance

Cloud TPUs are a family of hardware accelerators that Google designed and optimized specifically to speed up and scale up machine learning workloads for training and inference programmed with TensorFlow. Cloud TPUs are designed to deliver the best performance per dollar for targeted TensorFlow workloads (//github.com/tensorflow/tpu/tree/master/models/official) and to enable ML engineers and researchers to iterate more quickly.

Learn more → (https://cloud.google.com/tpu/)

Kubeflow

The machine learning toolkit for Kubernetes

Kubeflow makes deployments of machine learning workflows on Kubernetes simple, portable, and scalable by providing a straightforward way to deploy best-of-breed open-source systems for ML to diverse infrastructures.

Learn more ↗ (//www.kubeflow.org)

More AI resources

Get started with machine learning on Google Cloud.

AI solutions

Quickly and easily deploy state-of-the-art, pre-trained AI solutions like Cloud Talent Solution, Document Understanding AI, and Contact Center AI across your organization.

See AI solutions → (https://cloud.google.com/s

Consulting Services

Google Cloud consultants offer technical expertise from machine learning (//services.google.com/fh/files/misc/cloud_discover_machine_learning.pdf) and deployment (//services.google.com/fh/files/misc/cloud_deploy_machine_learning.pdf) to data and analytics.

View consulting services → (https://cloud.google.com

TensorFlow Enterprise

TensorFlow Enterprise delivers enterprise-grade support, performance, and managed services for your AI workloads.

View TensorFlow Enterprise → (https://cloud.google.com/enterprise/)

Pricing

Learn more about Google Cloud's customer-friendly pricing.

View cloud pricing → (https://cloud.google.com/pri

Advanced Solutions Lab

Work side by side with Google's machine learning experts in Google's Advanced Solutions Lab (ASL).

Learn about ASL → (https://cloud.google.com/asl/

AI Workshop

Discover and use experimental AI technologies curated from Google's research teams.

Learn about AI Workshop → (https://cloud.google.com/workshop/)

Google Cloud AI partners

Google Cloud machine learning partners come with deep AI expertise to help you incorporate machine learning for your needs and use cases. Our partners can help across every stage of model development and serving — getting your data ready for ML — and provide the right tools and platforms for your work, off-the-shelf AI solutions, or customized services to build AI solutions fine-tuned for your needs.

More Google machine learning partners → (https://cloud.google.com/products/machine-learning/partners/)