Intel Geti

Computer Vision AI Platform

Features

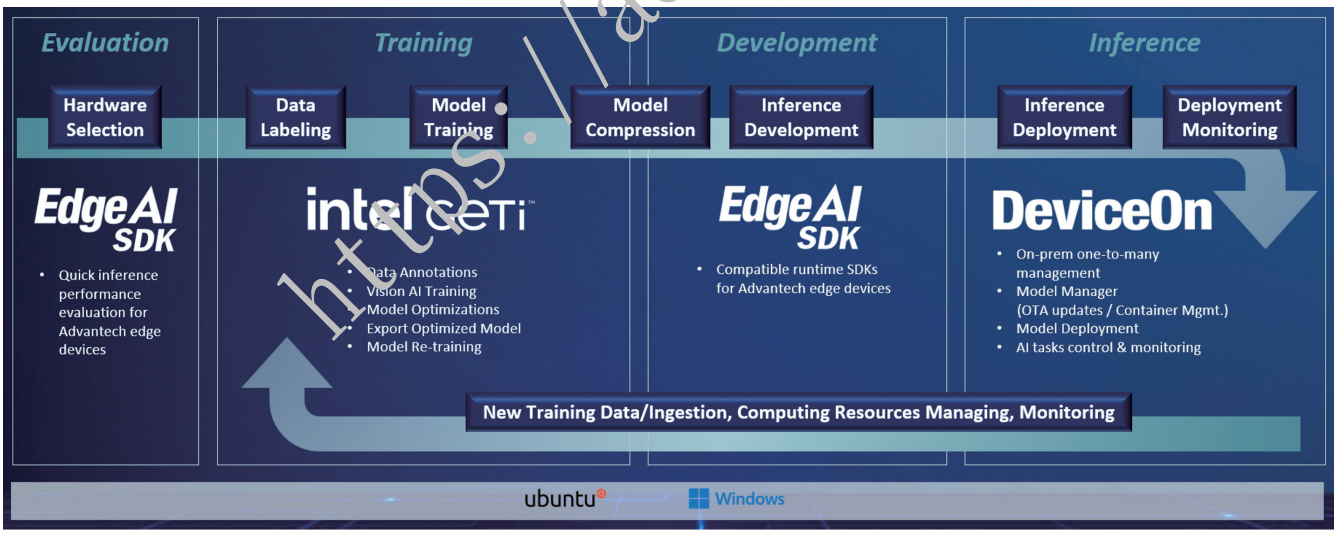
- Expedite data labeling with smart annotations
- Achieve a working model with less data via active learning
- Optimize and quantize vision models automatically
- Export production-ready models for deployment
- Deploy and manage models via **DeviceOn** OTA and Container Management
- Quick inference benchmark and compatible runtime SDKs via Edge AI SDK

Introduction

Intel Geti is a software platform designed to accelerate the development of computer vision AI models. It enables users to build these models more efficiently, using less data and in a fraction of the time typically required. The platform simplifies the process of data labeling, model training, and optimization, making it easier for teams to produce custom AI models at scale.

This platform is particularly useful for a variety of industries, including smart cities, autonomous driving, and medical imaging analysis, where robust and efficient computer vision solutions are critical. By streamlining the AI model development process, Intel Geti helps teams bring innovative AI solutions to market faster.

Vision AI Development Flow & Value Chain



Intel Geti Platform Technical Details

Supported Tasks

- Object detection, classification, segmentation
- Anomaly classification
- Task chaining for building models with multiple analytical steps

Supported Deep Learning Models

There are a range of deep learning model architectures supported in the Intel Geti platform today, and support for additional architectures will be coming in future releases. The table below summarizes those supported models and also provides references to academic literature for readers interested in developing a deeper understanding.

Computer vision task	Task types	Model architectures supported
Image classification	Single label, multi-label, hierarchical	LinearHead x (Mobilenet-V3, EfficientNet-B0)
Object detection	–	ATSS + MobileNet-V2, SSD + MobileNet-V2, YOLOX + CSPDarkNet
Instance segmentation	Counting, rotated object detection	MaskRCNN x (ResNet50, EfficientNet-B2)
Semantic segmentation	–	Lite-HRNet
Anomaly-based tasks	Classification, detection, segmentation	STFPM, PADIM

Supported AI Frameworks

- TensorFlow
- PyTorch

Supported Deep Learning Formats

- Native TensorFlow
- PyTorch
- OpenVINO toolkit (Intel hardware)

Integrations

An SDK enables you to utilize REST APIs for exporting datasets, annotations, and models directly into downstream processes. This API SDK provides functionality for (1) computer vision task creation from datasets on disk, (2) project downloading (images, videos, configuration, annotations, predictions, and models), and (3) deploying a project for local inference with OpenVINO toolkit.

System Requirements

On-Premise HW Installation

- CPU for workstations: Intel® Core™ i7, Intel® Core™ i9 or Intel® Xeon® scalable processors family capable of running 20 concurrent threads (K3s) or 48 concurrent threads (K8s).
- GPU: min. one NVIDIA GPU with min. 16GB of memory (e.g. RTX 4080, RTX 3090, RTX 6000, RTX 8000, Tesla A100, Tesla V100, Tesla P100, or Tesla T4.)
- Memory: min. 64 GB RAM (128 GB recommended) per GPU
- Disk Space: min. 1 TB (2 TB recommended) available space on the root partition
- OS: Ubuntu 20.04 LTS or Ubuntu 22.04 LTS

Cloud Deployment

The Intel® Geti™ platform needs a static IP address to work and cloud providers offer different means to ensure that.

- VM Type: g5.8xlarge (AWS), Standard_NC24s_v3 (Azure)
- CPU for cloud deployment: CPUs capable of running min. 24 concurrent threads for K3s or min. 48 concurrent threads for K8s
- Disk Space: min. 500 GB (1 TB recommended) available space on the root partition
- OS: Ubuntu 20.04 LTS or Ubuntu 22.04 LTS

Order Information

License Types	Starter, Annual License	Professional, Annual License	Business, Annual License
PN	31OTGETISTTRA1	31OTGETIPROFA1	31OTGETIBIZZA1
Description	▪ 1 Name User ▪ Single model training ▪ 1 instance ▪ Recommended for POC ▪ Basic Support	▪ Team Collaboration ▪ 3 Named users for small team ▪ 2 Concurrent model trainings ▪ 1 instance ▪ Recommended for small teams ▪ Basic Support	▪ Team Collaboration ▪ 10 Named users for improved ▪ Up to 4 Concurrent model trainings ▪ 1 instance ▪ Recommended for medium size teams ▪ Basic Support
Recommended Hardware	▪ Intel CPUs capable of running min. 20, recommended from 24 concurrent threads ▪ 1 x Nvidia GPU, min. 16 GB, 24 GB recommended ▪ 64 GB min., 128 GB recommended ▪ 1 TB min., 2 TB recommended ▪ Ubuntu 20.04 or 22.04 LTS	▪ Intel CPUs capable of running min. 24, recommended from 32 concurrent threads ▪ 2 x Nvidia GPU, min. 16 GB, 24 GB recommended ▪ 128 GB min., 256 GB recommended ▪ 2 TB min., 4 TB recommended ▪ Ubuntu 20.04 or 22.04 LTS	▪ Intel CPUs capable of running min. 32, recommended from 40 concurrent threads ▪ 4 x Nvidia GPU, min. 16 GB, 24 GB recommended ▪ 256 GB or 512 GB ▪ 4 TB min., 8 TB recommended ▪ Ubuntu 20.04 or 22.04 LTS
Free Trial	14-day cloud-based or on-prem trial, enable unlimited usage ▪ Drive proof of value ▪ Incur no cost for using the software and generating models ▪ Enables unlimited usage		

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* A license is required to activate Geti platform, please contact your Advantech sales representative for availability.

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