Solution Overview

Accelerate Machine Learning Workflows

Fast-forward your AI development with NVIDIA RTX PRO AI Workstations and NVIDIA AI Workbench.

Challenges for AI and Machine Learning Developers

The rapid growth of AI—sparked by the release of ChatGPT and image generation models, and bolstered by the proliferation of API services and open models—has inspired enterprises to look into adopting this technology across their business. AI workstations have the potential to provide AI and machine learning (ML) developers a way to work with data privately and avoid the cost and latency of cloud resources.

Unfortunately, AI and ML developers encounter many challenges to productivity, flexibility, and collaboration. Setting up a development environment on a GPU system isn't always straightforward. Migrating development projects and workloads to different systems can require significant effort and technical skill. And identifying, installing, and managing elements of AI and ML workflows requires time and technical expertise.

What Is NVIDIA AI Workbench?

NVIDIA AI Workbench is a free platform for full-stack, GPU-accelerated development, offering a cloud-like UX for working on AI workstations. It automates technical tasks that often hinder beginners and derail experts, enabling developers to experience greater productivity, more flexibility, and smoother collaboration.

AI Workbench provides AI and ML developers with:

- Single UI/UX for working locally or remotely.
- Zero setup, reproducible full-stack development environments for working with NVIDIA GPUs.
- Easy lift, shift, and collaboration through platforms like GitHub and GitLab.
- Managed single and multi-container development environments and workflows.

NVIDIA AI Workbench Example Projects

Chat with a virtual AI assistant:

- Build a virtual product assistant using a multimodal retrieval-augmented generation (RAG) pipeline.
- Run locally with an NVIDIA AI API or a microservice.

Deploy RAG applications with NIM Anywhere:

- Build RAG applications easily using NVIDIA NIM™ microservices locally on AI workstations.
- Scale from local setups to full production environments.

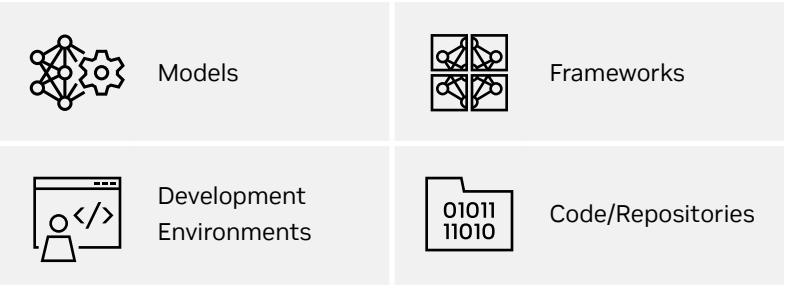
Fine-tune the model using custom images:

- Customize a Stable Diffusion XL model using DreamBooth with your own images.
- Run and fine-tune locally on AI workstations.

Workbench Projects

NVIDIA makes it easy to get started with example projects in AI using the latest models from Hugging Face and NVIDIA, which can be adapted and optimized for different datasets, GPUs, and use cases.

AI Workbench projects are Git repositories that contain simple configuration files that define a containerized development environment. Workbench projects contain or reference everything needed for interactive development, including:



AI Workbench projects include all resources in a development workflow.

NVIDIA RTX PRO AI Workstations

NVIDIA RTX PRO™ AI Workstations offer incredible desktop computing performance, making them ideal for AI training and data science workflows. With AI Workbench, these robust workstations enable developers to create, test, and iterate on smaller AI models locally with exceptional efficiency. At the same time, these workstations provide seamless integration with data center and cloud resources for the development of larger, more complex models. With up to four NVIDIA RTX PRO 6000 Blackwell Workstation Edition Series GPUs per workstation, these AI workstations provide an impressive 14.2 petaFLOPS of combined AI compute performance and 384 GB of total system GPU memory—bringing data center AI computing power to the desktop.

NVIDIA AI APIs

The NVIDIA API Catalog contains endpoints for a wide range of AI use cases, including LLMs, semantic search, image generation, and speech. AI Workbench automatically manages API access, making it seamless to include these as a part of your AI workflows. Many of the APIs come with example projects, which can be downloaded and run locally in AI Workbench on your own AI workstation.

Availability

NVIDIA AI Workbench is available as a free download for Windows, macOS, and Ubuntu Linux. Users can access a range of example projects for free on GitHub or create their own. Enterprise support for AI Workbench is available for customers who purchase a license for NVIDIA AI Enterprise.

AI workstations are available from leading OEM workstation manufacturers and are designed and built for demanding enterprise deployments. Powered by the latest generation of workstation CPUs and available with NVIDIA® ConnectX® high-performance networking solutions, AI workstations are ready to tackle demanding data science and AI development workflows.

Features

Interface:

- Command-line interface (CLI)
- Desktop app

Containers:

- Docker or Podman
- Containers from the NVIDIA® NGC™ catalog
- Custom containers

Model repositories:

- Hugging Face
- NVIDIA

Development environments:

- JupyterLab
- Visual Studio Code

Operating systems:

- Windows
- Ubuntu
- macOS

AI Workbench Benefits

Benefit	Description
Greater Productivity	> Streamlines AI and ML development workflows > Provides easy access to GPU-accelerated infrastructure > Shortens development cycles and time to value
More Flexibility	> Provides easy access to a wide variety of AI and data science models and frameworks from industry-leading repositories > Works with your preferred development environment > Enables you to start locally on an RTX PRO AI Workstation and seamlessly scale to more powerful remote systems, data centers, or the cloud as compute needs grow
Seamless Collaboration	> Offers the ability to effortlessly share resources for collaboration on projects > Tracks project dependencies, maintains version control, and reproduces projects faithfully across platforms to enable effective collaboration > Automates tasks to eliminate barriers between developer roles and skill levels—resulting in well-coordinated team projects

Ready to Get Started?

To download and learn more about RTX PRO AI Workstations, visit: nvidia.com/ai-workstations.

Contact NVIDIA sales at nvidia.com/en-us/contact/sales

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