Catalog

NVIDIA Training Course Catalog

January 2025

Introduction

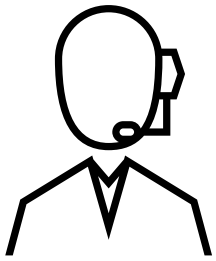
NVIDIA offers training for diverse needs, giving individuals and teams across organizations what they need to advance their knowledge in AI, accelerated computing, data science, data center administration, graphics and simulation, networking, and more.

With access to high-performance computing, you'll learn how to train, optimize, and deploy neural networks using the latest deep learning tools, frameworks, and SDKs. You'll also learn how to assess, parallelize, optimize, and deploy NVIDIA-accelerated computing applications.

Our training program offers both self-paced online courses and instructor-led, prescheduled workshops. The self-paced courses range from ten minutes to eight hours and guide you through applying a specific technology, setting up a project, or administering solutions in a data center. Instructor-led workshops and boot camps go deeper into topic areas, teaching you how to implement a project or solution from end to end. Both types of courses give you valuable hands-on experience using the latest technologies.

Why Choose NVIDIA for Training?

- Learn how to build deep learning and accelerated computing applications for industries such as healthcare, robotics, autonomous driving, manufacturing, and more.
- Gain hands-on experience with the most widely used, industry-standard platforms including software, hardware, tools, and frameworks. Each student will have access to a fully configured, GPU-accelerated server in the cloud or access to NVIDIA solutions in our training lab.
- Become proficient in administering NVIDIA hardware and software solutions such as DGX™, InfiniBand, Cumulus, NVIDIA AI Enterprise, and more.
- Access instructor-led workshops and online courses from anywhere using just a laptop and internet connection.
- Acquire real-world expertise through content designed in collaboration with industry leaders such as Children's Hospital of Los Angeles, Mayo Clinic, and PwC.
- Earn NVIDIA certifications and course completion certificates to indicate subject matter competency and support your career growth.



For team training, contact an NVIDIA training advisor, who will work with you to create a customized plan that addresses your team's specific training needs and is aligned to your business objectives and priorities.

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Instructor-Led Workshops for Developers

Accelerated Computing

Accelerating CUDA C++ Applications With Multiple GPUs

Discover how to write CUDA C++ applications that efficiently and correctly use all available GPUs in a single node, dramatically improving the performance of applications and making the most cost-effective use of systems with multiple GPUs.

> Learn More

Prerequisites: Professional experience programming CUDA C/C++ applications, including the use of the NVIDIA CUDA Compiler (NVCC), kernel launches, grid-stride loops, host-to-device and device-to-host memory transfers, and CUDA error handling. Familiarity with the Linux command line and experience using makefiles to compile C/C++ code.

Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
CUDA C++, NVCC, NVIDIA Nsight Systems	English, Simplified Chinese	8 hours	$500 (excludes tax, if applicable)	Yes

Fundamentals of Accelerated Computing With CUDA C/C++

Learn how to accelerate and optimize existing C/C++ CPU-only applications to apply the power of GPUs using the most essential CUDA techniques and the NVIDIA Nsight Systems profiler.

> Learn More

Prerequisites: Basic C/C++ competency, including familiarity with variable types, loops, conditional statements, functions, and array manipulations. No previous knowledge of CUDA programming is assumed.

Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
NVIDIA Nsight Systems, nsys	English, Korean, Japanese, Simplified Chinese, Traditional Chinese	8 hours	$500 (excludes tax, if applicable)	Yes

Fundamentals of Accelerated Computing With CUDA Python

Explore how to use Numba—the just-in-time, type-specializing Python function compiler—to create and launch CUDA kernels to accelerate Python programs on massively parallel NVIDIA GPUs.

> Learn More

Prerequisites: Basic Python competency, including familiarity with variable types, loops, conditional statements, functions, and array manipulations. Also, must have NumPy competency, including the use of ndarrays and ufuncs.

Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
CUDA, Python, Numba, NumPy	English, Simplified Chinese, Traditional Chinese	8 hours	$500 (excludes tax, if applicable)	Yes

Fundamentals of Accelerated Computing With OpenACC

Find out how to write and configure code parallelization with OpenACC, optimize memory movements between the CPU and GPU accelerator, and apply the techniques to accelerate a CPU-only Laplace heat equation to achieve performance gains.

> Learn More

Prerequisites: Basic C/C++ or Fortran competency, including familiarity with variable types, loops, conditional statements, functions, and array manipulations. No previous knowledge of GPU programming is assumed.

Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
NVIDIA Nsight, OpenACC	English	8 hours	$500 (excludes tax, if applicable)	Yes

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Workshop Name	Description	Prerequisites	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
Scaling CUDA C++ Applications to Multiple Nodes	Learn the tools and techniques needed to write CUDA C++ applications that can scale efficiently to clusters of NVIDIA GPUs. > Learn More	Intermediate experience writing CUDA C/C++ applications.	C++, CUDA, MPI, NVSHMEM	English, Simplified Chinese	8 hours	$500 (excludes tax, if applicable)	Yes

Data Science

Workshop Name	Description	Prerequisites	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
Accelerating Data Engineering Pipelines	Explore how to employ advanced data engineering tools and techniques with GPUs to significantly improve data engineering pipelines. > Learn More	Intermediate knowledge of Python (list comprehension, objects). Familiarity with pandas and introductory statistics (mean, median, mode) a plus.	pandas, cuDF, Dask, NVTabular, Plotly	English	8 hours	$500 (excludes tax, if applicable)	Yes
Enhancing Data Science Outcomes With Efficient Workflow	Learn how to create an end-to-end, hardware-accelerated machine learning pipeline for large datasets. Throughout the development process, you'll use diagnostic tools to identify delays and learn to mitigate common pitfalls. > Learn More	> Basic knowledge of a standard data science workflow on tabular data. > Knowledge of distributed computing using Dask. > Completion of the DLI's Fundamentals of Accelerated Data Science course or an ability to manipulate data using cuDF and some experience building machine learning models using cuML.	Python, cuDF, Dask, Plotly, NVTabular, cuML, Forest Inference Library, PyTorch, and NVIDIA Triton Inference Server	English	8 hours	$500 (excludes tax, if applicable)	Yes
Fundamentals of Accelerated Data Science	Learn how to perform multiple analysis tasks on large datasets using NVIDIA RAPIDS, a collection of data science libraries that allows end-to-end GPU acceleration for data science workflows. > Learn More	Professional data science experience with Python, including proficiency in pandas and NumPy. Also, must have familiarity with common machine learning algorithms, including XGBoost, linear regression, DBSCAN, K-Means, and SSSP.	RAPIDS, cuDF, XGBoost, cuML, cuGraph, Dask, cuPy, pandas, NumPy, Bokeh	English, Traditional Chinese, Japanese	8 hours	$500 (excludes tax, if applicable)	Yes

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Deep Learning

Applications of AI for Anomaly Detection

Learn to detect anomalies in large datasets to identify network intrusions using supervised and unsupervised machine learning techniques, such as accelerated XGBoost, autoencoders, and generative adversarial networks (GANs).

> Learn More

Prerequisites: Experience with convolutional neural networks (CNNs) and Python.

Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
RAPIDS, XGBoost, TensorFlow, Keras, pandas, autoencoders, GANs	English	8 hours	$500 (excludes tax, if applicable)	Yes

Applications of AI for Predictive Maintenance

Discover how to identify anomalies and failures in time-series data, estimate the remaining useful life of the corresponding parts, and use this information to map anomalies to failure conditions.

> Learn More

Prerequisites: Experience with Python and deep networks.

Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
Python, TensorFlow, Keras, XGBoost, RAPIDS, cuDF, long short-term memory (LSTM), autoencoders	English, Simplified Chinese	8 hours	$500 (excludes tax, if applicable)	Yes

Building AI-Based Cybersecurity Pipelines

Traditional cybersecurity methods include creating barriers around your infrastructure to protect it from intruders. However, as enterprises continue to digitally transform, they're faced with a proliferation of devices, more sophisticated cybersecurity attacks, and an incredibly vast network of data to protect—which means new cybersecurity methodologies must be explored. An alternative approach is to address cybersecurity as a data science problem: Better understand all the users and activities across your network so that you can identify which transactions are typical and which are potentially nefarious.

The NVIDIA Morpheus AI framework lets cybersecurity developers and practitioners harness the power of GPU computing to implement cybersecurity solutions that perform on a scale never before possible. With Morpheus, cybersecurity developers can create optimized AI pipelines for filtering, processing, and classifying large volumes of real-time data. Bringing a new level of information security to data centers, Morpheus enables dynamic protection, real-time telemetry, and adaptive defenses for detecting and remediating cybersecurity threats.

> Learn More

Prerequisites:
> Professional data science and/or data analysis experience.
> Competency with the Python programming language.
> Competency with the Linux command line.

Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
NVIDIA Morpheus, NVIDIA Triton Inference Server, RAPIDS, CLX, Helm, Kubernetes	English	8 hours	$500 (excludes tax, if applicable)	Yes

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Workshop Name	Description	Prerequisites	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
Building Conversational AI Applications V2.0	Discover how to quickly build and deploy production-quality speech AI applications with real-time transcription and natural language processing capabilities. > Learn More	Experience with Python coding and use of library functions and parameters. Also, a fundamental understanding of a deep learning framework, such as TensorFlow, PyTorch, or Keras, and a basic understanding of neural networks.	NVIDIA Riva, NVIDIA TAO Toolkit, Kubernetes	English	8 hours	$500 (excludes tax, if applicable)	Yes
Building Deep Learning-Based Anti-Fraud Applications (Chinese only)	This course is primarily for data scientists and professionals working in the field of financial fraud modeling in banks. It teaches how to train, accelerate, and optimize fraud detection classifiers based on machine learning and deep learning. > Learn More	> Basic Python programming experience. > Fundamental understanding of deep learning frameworks (such as TensorFlow, PyTorch, or Keras). > Basic knowledge of neural networks.	RAPIDS, CuPy, PyTorch, Deep Graph Library, NVIDIA NeMo, NVIDIA Triton Inference Server	Simplified Chinese	8 hours	$500 (excludes tax, if applicable)	Yes
Computer Vision for Industrial Inspection	In this workshop, you'll learn how to quickly develop and deploy a machine learning model that uses deep learning for computer vision to perform defect classification and other visual recognition tasks. Using NVIDIA's own production dataset as an example, this workshop illustrates how the solution can be easily applied to a variety of manufacturing and industrial inspection use cases. > Learn More	> Experience with Python; basic understanding of data processing and deep learning > To gain experience with Python, we suggest this Python tutorial > For a basic understanding of data processing and deep learning, we suggest Fundamentals of Deep Learning.	Python, pandas, NVIDIA DALI, NVIDIA TAO Toolkit, NVIDIA TensorRT, and NVIDIA Triton Inference Server	English, Simplified Chinese	8 hours	$500 (excludes tax, if applicable)	Yes
Data Parallelism: How to Train Deep Learning Models on Multiple GPUs	This workshop teaches you techniques for data-parallel deep learning training on multiple GPUs to shorten the training time required for data-intensive applications. Working with deep learning tools, frameworks, and workflows to perform neural network training, you'll learn how to decrease model training time by distributing data to multiple GPUs, while retaining the accuracy of training on a single GPU. > Learn More	Experience with deep learning training using Python. See the Fundamentals of Deep Learning self-paced course.	PyTorch, PyTorch Distributed Data Parallel, NCCL	English, Simplified Chinese	8 hours	$500 (excludes tax, if applicable)	Yes

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Workshop Name	Description	Prerequisites	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
Getting Started With AI on NVIDIA Jetson Nano	Build and train a classification dataset and model with NVIDIA Jetson Nano. > Learn More	Basic familiarity with Python	PyTorch, NVIDIA Jetson Nano	English	8 hours	$500 (excludes tax, if applicable)	Yes
Fundamentals of Deep Learning	Learn how deep learning works through hands-on exercises in computer vision and natural language processing (NLP). You'll train deep learning models from scratch and pick up tricks and tools for achieving highly accurate results along the way. You'll also learn to leverage freely available, state-of-the-art pretrained models to save time and get your deep learning application up and running quickly. > Learn More	An understanding of fundamental programming concepts in Python 3, such as functions, loops, dictionaries, and arrays. Also, familiarity with pandas data structures and an understanding of how to compute a regression line. > Suggested materials to satisfy prerequisites: Python Beginner's Guide	Tensorflow, Keras, pandas, NumPy	English, Simplified Chinese, Japanese	8 hours	$500 (excludes tax, if applicable)	Yes
Model Parallelism: Building and Deploying Large Neural Networks	In this workshop, you'll learn how to scale training and deployment of LLMs and neural networks across multiple nodes, use various forms of model parallelism to overcome the challenges associated with large-model memory footprint, capture and understand training performance characteristics to optimize model architecture and deploy very large multi-GPU, multi-node models to production using NVIDIA Triton Inference Server. > Learn More	> Good understanding of PyTorch, deep learning, and data parallel training concepts > Practice with multi-GPU training and natural language processing is useful, but optional.	PyTorch, Megatron-LM, DeepSpeed, Slurm, NVIDIA Triton Inference Server, NVIDIA Nsight	English, Korean, Simplified Chinese	8 hours	$500 (excludes tax, if applicable)	Yes

Generative AI and Large Language Models (LLMs)

Workshop Name	Description	Prerequisites	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
Building RAG Agents With LLMs	Learn how to design retrieval-augmented generation (RAG) systems and bundle them into deliverable formats. Along the way, you'll learn advanced LLM composition techniques for internal reasoning, dialog management, and tooling. > Learn More	> Introductory deep learning, with comfort with PyTorch and transfer learning preferred. > Intermediate Python experience, including object-oriented programming and libraries.	Python, LangChain, NVIDIA AI Foundation endpoints, FAISS, Gradio, LangServe, FastAPI	English	8 hours	$500 (excludes tax, if applicable)	Yes

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Workshop Name	Description	Prerequisites	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
Building Transformer-Based Natural Language Processing Applications	Learn how to apply and fine-tune a transformer-based deep learning model to natural language processing (NLP) tasks. > Learn More	> Experience with Python coding and use of library functions and parameters. > Fundamental understanding of a deep learning framework such as TensorFlow, PyTorch, or Keras. > Basic understanding of neural networks.	PyTorch, pandas, NVIDIA NeMo, NVIDIA Triton Inference Server	English	8 hours	$500 (excludes tax, if applicable)	Yes
Building LLM Applications With Prompt Engineering	In this course, you'll go beyond prompt engineering LLMs and learn a variety of techniques to efficiently customize pretrained LLMs for your specific use cases—without engaging in the computationally intensive and expensive process of pretraining your own model or fine-tuning a model's internal weights. Using NVIDIA NeMo service, you'll learn various parameter-efficient fine-tuning methods to customize LLM behavior for your organization. > Learn More	This course is primarily intended for intermediate level and above Python developers with a solid understanding of LLM fundamentals and some prompt engineering experience.	NVIDIA NeMo Service	English	8 hours	$500 (excludes tax, if applicable)	Yes
Efficient Large Language Model (LLM) Customization	Learn a variety of techniques to efficiently customize pretrained LLMs for your specific use cases—without engaging in the computationally intensive and expensive process of pretraining your own model or fine-tuning a model's internal weights. Using the open-source NVIDIA NeMo framework, you'll learn prompt engineering and various parameter-efficient fine-tuning methods to customize LLM behavior for your organization. > Learn More	> Professional experience with the Python programming language. > Familiarity with fundamental deep learning topics like model architecture, training and inference. > Familiarity with a modern Python-based deep learning framework (PyTorch preferred). > Familiarity working with out-of-the-box pretrained LLMs.	Python, NVIDIA NeMo, GPT, LLaMA, HuggingFace	English	8 hours	$500 (excludes tax, if applicable)	Yes
Generative AI With Diffusion Models	Get started with gen AI application development with this hands-on course where you'll learn how to build a text-to-image generative AI application using the latest techniques. Generate images with diffusion models and refine the output with various optimizations. Build a denoising diffusion model from the U-Net architecture to context embeddings for greater user control. > Learn More	> Good understanding of PyTorch > Good understanding of deep learning	PyTorch, CLIP	English	8 hours	$500 (excludes tax, if applicable)	Yes

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Workshop Name	Description	Prerequisites	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
Rapid Application Development With Large Language Models (LLMs)	In this course, you'll gain a strong understanding and practical knowledge of LLM application development by exploring the open-source ecosystem, including pretrained LLMs, that can help you get started quickly developing LLM-based applications. > Learn More	> Introductory deep learning, with comfort with PyTorch and transfer learning preferred. Content covered by DLI's Getting Started With Deep Learning or Fundamentals of Deep Learning courses, or similar experience is sufficient. > Intermediate Python experience, including object-oriented programming and libraries. Content covered by Python Tutorial (w3schools.com) or similar experience is sufficient.	Python, PyTorch, HuggingFace, transformers, LangChain, LlamaIndex	English	8 hours	$500 (excludes tax, if applicable)	Yes

Graphics and Simulation

Workshop Name	Description	Prerequisites	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
Bootstrapping Computer Vision Models With Synthetic Data	Learn how to use NVIDIA Omniverse Replicator, a core Omniverse extension, to accelerate the development of computer vision models. Generate accurate, photorealistic, physics-conforming synthetic data to ease the expensive, time-consuming task of labeling real-world data. Omniverse Replicator accelerates AI development at scale and reduces time to production. > Learn More	> Intermediate understanding of Python (including classes, objects, and decorators). > Basic understanding of machine learning and deep learning concepts and pipelines.	NVIDIA Omniverse Replicator, Omniverse Defect Extension	English	8 hours	$500 (excludes tax, if applicable)	Yes
Building Digital Avatar Pipelines With NVIDIA Omniverse Audio2Face and Riva (Chinese only)	This course, from an end-to-end application development perspective, will provide you with detailed guidance on how to use NVIDIA Omniverse Audio2Face and the interactive speech suite NVIDIA Riva to build virtual digital humans. > Learn More	> Basic Python programming experience. > Fundamental understanding of deep neural networks.	NVIDIA Omniverse Audio2Face, NVIDIA Riva, PyTorch	Simplified Chinese	8 hours	$500 (excludes tax, if applicable)	Yes

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Online, Self-Paced Courses for Developers

Accelerated Computing Fundamentals

Course Name	Description	Prerequisites	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
Accelerating CUDA C++ Applications With Concurrent Streams	Discover how to improve performance for your CUDA C/C++ applications by overlapping memory transfers to and from the GPU with computations on the GPU. > Learn More	Professional experience programming CUDA C/C++ applications, including the use of the nvcc compiler, kernel launches, grid-stride loops, host-to-device and device-to-host memory transfers, and CUDA error handling; Experience using Makefiles to compile C/C++ code.	N/A	English	4 hours	$30 (excludes tax, if applicable)	Yes
An Even Easier Introduction to CUDA	Learn the basics of writing parallel CUDA kernels to run on NVIDIA GPUs. > Learn More	Competency writing applications in CUDA C/C++.	C/C++	English	1 hour	Free	N/A
Fundamentals of Accelerated Computing With CUDA Python	Explore how to use Numba—the just-in-time, type-specializing Python function compiler—to create and launch CUDA kernels to accelerate Python programs on massively parallel NVIDIA GPUs. > Learn More	Basic Python competency, including familiarity with variable types, loops, conditional statements, functions, and array manipulations. Also, must have NumPy competency, including the use of ndarrays and ufuncs.	CUDA, Python, Numba, NumPy	English, Simplified Chinese, Traditional Chinese	8 hours	$90 (excludes tax, if applicable)	Yes
Fundamentals of Accelerated Computing With OpenACC	Find out how to build and optimize accelerated heterogeneous applications on multiple GPU clusters using a combination of OpenACC, CUDA-aware MPI, and NVIDIA profiling tools. > Learn More	Basic experience with C/C++	OpenACC, C/C++	English	8 hours	$90 (excludes tax, if applicable)	N/A
Getting Started With Accelerated Computing in CUDA C/C++	Discover how to accelerate and optimize existing C/C++ CPU-only applications to leverage the power of GPUs using the most essential CUDA techniques and the Nsight Systems profiler. > Learn More	Basic C/C++ competency, including familiarity with variable types, loops, conditional statements, functions, and array manipulations. No previous knowledge of CUDA programming is assumed.	C/C++, CUDA	English, Japanese, Korean, Simplified Chinese, Traditional Chinese	8 hours	$90 (excludes tax, if applicable)	Yes

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Course Name	Description	Prerequisites	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
GPU Acceleration With the C++ Standard Library	Learn to write simple, portable, parallel-first applications using only standard C++ language features that can be compiled without modification to take advantage of NVIDIA GPU-accelerated environments. **>** Learn More	Beginner-level experience with C++11. Comfort working with C++ lambdas and standard library algorithms.	C++, NVIDIA HPC SDK	English	2 hours	$30 (excludes tax, if applicable)	N/A
Optimizing CUDA Machine Learning Codes With NVIDIA Nsight Profiling Tools	NVIDIA developer tools are a collection of applications, spanning desktop and mobile targets, that enable developers to build, debug, profile, and develop class-leading and cutting-edge software using the latest visual computing hardware from NVIDIA. In this course, you'll learn the effective use of two powerful NVIDIA developer tools: Nsight Systems and Nsight Compute. Nsight Systems provide developers with a system-wide visualization of an application's performance. Developers can optimize bottlenecks to scale efficiently across any number or size of CPU and GPU—from large servers to the smallest systems on chip. Nsight Compute is an interactive kernel profiler for CUDA applications. It provides detailed performance metrics and API debugging via a user interface and command-line tool. By the time you complete this course, you'll be able to use Nsight Systems and Nsight Compute to analyze and optimize CUDA applications. Following best practices, you'll begin by using Nsight Systems to analyze overall application structure and explore parallelization opportunities before turning to Nsight Compute to analyze and optimize individual CUDA kernels. **>** Learn More	Familiarity with machine learning applications using CUDA. We suggest Fundamentals of Accelerated Computing with CUDA C/C++.	NVIDIA Nsight Systems, NVIDIA Nsight Compute	English	2 hours	$30 (excludes tax, if applicable)	N/A
Scaling GPU-Accelerated Applications With the C++ Standard Library	In this interactive, hands-on workshop, which is the followup to GPU Acceleration With the C++ Standard Library, you'll learn how to write scalable, GPU-accelerated, hybrid applications using C++ standard language features alongside MPI. **>** Learn More	Beginner-level experience with C++11; comfort working with C++ lambdas and standard library algorithms; experience developing C++/MPI hybrid applications that require inter-rank communication; comfort working with C++ concurrency primitives such as std::thread, std::barrier, and andstd::thread.	C++, NVIDIA HPC SDK, MPI	English	2 hours	$30 (excludes tax, if applicable)	N/A
Scaling Workloads Across Multiple GPUs With CUDA C++	Learn how to build robust and efficient CUDA C++ applications that can take advantage of all available GPUs on a single node. **>** Learn More	Competency writing applications in CUDA C/C++.	C/C++, accelerated computing, CUDA	English	4 hours	$30 (excludes tax, if applicable)	Yes

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Course Name	Description	Prerequisites

Data Science

Accelerate Data Science Workflows With Zero Code Changes

In this workshop, you'll learn to use RAPIDS to speed up your CPU-based data science workflows.

> Learn More

Basic understanding of data processing and knowledge of a standard data science workflow on tabular data.

Experience using common Python libraries for data analytics.

Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
CUDA, MPI, NVSHMEM	English, Simplified Chinese	6 hours	$90 (excludes tax, if applicable)	Yes

Accelerating End-to-End Data Science Workflows

Explore how to perform multiple analysis tasks on large datasets using RAPIDS, a collection of data science libraries that allows end-to-end GPU acceleration for data science workflows.

> Learn More

Experience with Python, ideally including pandas and NumPy.

Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
RAPIDS, cuDF, cuML, cuGraph, Apache Arrow	English, Simplified Chinese	6 hours	$90 (excludes tax, if applicable)	Yes

RAPIDS Accelerator for Apache Spark

In this training lab, we'll walk through the RAPIDS Accelerator for Apache Spark, including running SQL queries on CPU and GPU in Spark and diving into the toolset that helps enable success.

> Learn More

> Basic experience with Linux terminal commands.
> Basic experience with Python.
> Basic experience with Spark, PySpark, or pandas.

Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
RAPIDS, Spark	English	2 hours	$30 (excludes tax, if applicable)	N/A

Deep Learning

Building a Brain in 10 Minutes

This one-click notebook explores the biological and psychological inspirations for the world's first neural networks.

> Learn More

An understanding of fundamental programming concepts in Python 3 such as functions, loops, dictionaries, and arrays.

Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
N/A	English	10 minutes	Free	N/A

Building Real-Time Video AI Applications

Gain the knowledge and skills needed to enable the real-time transformation of raw video data from widely deployed camera sensors into deep learning-based insights.

> Learn More

Competency in the Python 3 programming language, some experience manipulating data using pandas DataFrames, and familiarity with deep networks (specifically variations of CNNs).

Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
NVIDIA DeepStream, NVIDIA TAO Toolkit, and NVIDIA TensorRT	English, Simplified Chinese	8 hours	$90 (excludes tax, if applicable)	N/A

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Course Name	Description	Prerequisites	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
Deploying a Model for Inference at Production Scale	Learn how to deploy your own machine learning models on a GPU server. > Learn More	Familiarity with at least one machine learning framework, such as PyTorch, TensorFlow, ONNX, or TensorRT.	NVIDIA Triton	English	4 hours	$30 (excludes tax, if applicable)	N/A
Digital Fingerprinting With Morpheus	In this course, you'll get hands-on experience developing and deploying the NVIDIA digital fingerprinting AI workflow that enables 100% data visibility and drastically reduces the time to detect threats. You'll also hear from cybersecurity experts from a variety of institutions about how to use NVIDIA AI frameworks and tools to architect cybersecurity solutions. > Learn More	This tutorial doesn't have any prerequisites, but familiarity with defensive cybersecurity themes and the Linux command line is a plus.	NVIDIA Morpheus AI framework, NVIDIA Triton Inference Server	English	1 hour	Free	N/A
Disaster Risk Monitoring Using Satellite Imagery	Learn how to build and deploy a deep learning model to automate the detection of flood events using satellite imagery. This workflow can be applied to lower the cost, improve the efficiency, and significantly enhance the effectiveness of various natural disaster management use cases. > Learn More	> Competency in the Python 3 programming language. > Basic understanding of machine learning and deep learning concepts, specifically variations of convolutional neural networks (CNNs), and pipelines. > Interest in understanding how to manipulate satellite imagery using modern methods.	NVIDIA DALI, the NVIDIA TAO Toolkit, NVIDIA TensorRT, NVIDIA Triton Inference Server	English, Simplified Chinese	10 hours	Free	Yes
Exploring Adversarial Machine Learning	In this course, which is designed for both data scientists and security practitioners, you'll explore the security risks and vulnerabilities that adopting machine learning might expose you to. You'll also explore the latest techniques and tools being used by attackers and build some of your own attacks. > Learn More	> Intermediate experience with Python, ideally including PyTorch, pandas, and NumPy. > Solid understanding of machine learning and deep learning concepts and technologies, as provided in DLI's Fundamentals of Deep Learning course. > These prerequisites can be fulfilled with the self-paced Getting Started With Deep Learning course from DLI or other introductory Python-based machine learning training.	N/A	English	8 hours	$90 (excludes tax, where applicable)	Yes

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Course Name	Description	Prerequisites	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
Get Started With Highly Accurate Custom ASR for Speech AI	Learn to build, train, fine-tune, and deploy a GPU-accelerated automatic speech recognition service with NVIDIA Riva that includes customized features. > Learn More	Basic understanding of machine learning and deep learning concepts and pipelines. In addition, this lab requires that the user have an NVIDIA NGC account and API key. To fulfill this requirement, please: > Register and activate a free NGC account > Generate your NGC API key and save it in a safe location	NVIDIA Riva, NVIDIA TAO Toolkit, Kubernetes	English	3 hours	Price $30 (excludes tax, if applicable)	N/A
Getting Started With AI on Jetson Nano	Discover how to build a deep learning classification project with computer vision models using the NVIDIA Jetson Nano Developer Kit. > Learn More	Basic familiarity with Python (helpful, not required).	PyTorch, NVIDIA Jetson Nano	English	3 hours	Price $30 (excludes tax, if applicable)	N/A
Getting Started With Deep Learning	Explore the fundamentals of deep learning by training neural networks and using the results to improve performance and capabilities. > Learn More	> An understanding of fundamental programming concepts in Python 3, such as functions, loops, dictionaries, and arrays. > Familiarity with pandas data structures and an understanding of how to compute a regression line > Suggested materials to satisfy prerequisites: Python Beginner's Guide	TensorFlow 2 with Keras, pandas	English, Simplified Chinese	8 hours	$90 (excludes tax, if applicable)	Yes
Getting Started With Image Segmentation	Learn how to categorize segments of an image. > Learn More	Basic experience training neural networks.	TensorFlow 2 with Keras	English	2 hours	$30 (excludes tax, if applicable)	N/A
Integrating Sensors With NVIDIA DRIVE	Find out how to integrate automotive sensors into your applications using NVIDIA DRIVE. > Learn More	Basic experience in C++ and Linux terminal commands.	C++, NVIDIA DriveWorks	English	2 hours	$30 (excludes tax, if applicable)	N/A

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Course Name	Description	Prerequisites
Introduction to Graph Neural Networks	Learn the basic concepts, models, and applications of graph neural networks. > Learn More	Competency in the Python 3 programming language. Experience with deep neural networks (specifically variations of CNNs).

Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
Deep Graph Library, PyTorch	English	2 hours	$30 (excludes tax, if applicable)	N/A

Course Name	Description	Prerequisites
Introduction to Physics-Informed Machine Learning With NVIDIA Modulus	High-fidelity simulations in science and engineering are computationally expensive and time-prohibitive for quick iterative use cases, from design analysis to optimization. NVIDIA Modulus, the physics machine learning platform, turbocharges such use cases by building physics-based deep learning models that are 100,000X faster than traditional methods and offer high-fidelity simulation results. Upon completion, you'll understand the various building blocks of Modulus and the basics of physics-informed deep learning. You'll also understand how the Modulus framework integrates with the overall Omniverse platform. > Learn More	> Familiarity with the Python programming language. > An understanding of partial differential equations and their use in physics. > Familiarity with machine learning concepts like training and inference.

Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
NVIDIA Modulus	English	4 hours	$30 (excludes tax, if applicable)	N/A

Generative AI and Large Language Models (LLMs)

Course Name	Description	Prerequisites
Augment Your LLM Using Retrieval-Augmented Generation	Retrieval-augmented generation (RAG) is an end-to-end architecture that combines an information-retrieval component with a response generator. In this introductory course, we provide a starting point using components that NVIDIA uses internally. This workflow will jump-start you on your LLM and RAG journey. > Learn More	None

Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
N/A	English	1 hour	Free	N/A

Course Name	Description	Prerequisites
Building RAG Agents With LLMs	Agents powered by LLMs are quickly gaining popularity. An especially powerful recent development has been the popularization of retrieval-based LLM systems that can hold informed conversations by using tools, looking at documents, and planning their approaches. This course will observe how you can deploy an agent system in practice and scale up your system to meet the demands of users and customers. > Learn More	> Introductory deep learning knowledge, with comfort with PyTorch and transfer learning preferred. > Intermediate Python experience, including object-oriented programming and libraries.

Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
N/A	English	8 hours	Free	Yes

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Course Name	Description	Prerequisites	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
Generative AI Explained	Generative AI describes technologies that are used to generate new content based on a variety of inputs. In this course, you'll learn generative AI concepts, applications, as well as the challenges and opportunities in this exciting field. > Learn More	Basic understanding of machine learning and deep learning concepts	N/A	English	2 hours	Free	N/A
Generative AI With Diffusion Models	In this workshop, you'll train deep learning models from scratch and learn tools and tricks to achieve highly accurate results. You'll also learn to leverage freely available, state-of-the-art pretrained models to save time and get your deep learning application up and running quickly. > Learn More	An understanding of fundamental programming concepts in Python such as functions, loops, dictionaries, and arrays.	TensorFlow 2 with Keras, pandas	English	8 hours	$90 (excludes tax, if applicable)	Yes
Introduction to Deploying RAG Pipelines for Production at Scale	This course focuses on teaching production-level deployment of LLM applications, especially enterprise-grade deployment of RAG pipelines. It covers various aspects for an end-to-end deployment using Helm charts and NVIDIA NIM microservices. > Learn More	> Familiarity working with LLM-based applications > Familiarity with RAG pipelines > Familiarity working with Kubernetes > Familiarity working with Helm	Helm, NVIDIA NIM microservices	English	3 hours	$30 (excludes tax, if applicable)	N/A
Introduction to NVIDIA NIM Microservices	Learn how NVIDIA NIM enables the building, deploying, and scaling of AI applications. > Learn More	Familiarity with artificial intelligence	NVIDIA NIM microservices, Docker	English	2 hours	Free	N/A
Introduction to Transformer-Based Natural Language Processing	In this course, you'll learn how transformers are used as the building blocks of modern large language models (LLMs). You'll then use these models for various NLP tasks, including text classification, named-entity recognition (NER), author attribution, and question answering. > Learn More	> Basic understanding of deep learning concepts. > Basic understanding of language modeling and transformers.	NVIDIA NeMo	English	6 hours	$30 (excludes tax, if applicable)	Yes

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Course Name	Description	Prerequisites	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
Prompt Engineering With Llama 2	In this course, you'll interact with and prompt engineer Llama 2 models to analyze documents, generate text, and be an AI assistant. > Learn More	Experience with deep learning training using Python.	Llama 2, HuggingFace	English	3 hours	$30 (excludes tax, if applicable)	N/A
Rapid Application Development With Large Language Models (LLMs)	Get started quickly in developing LLM-based applications by exploring the open-sourced ecosystem, including pretrained LLMs. > Learn More	> Introductory deep learning, with comfort with PyTorch and transfer learning preferred. Content covered by DLI's Getting Started with Deep Learning or Fundamentals of Deep Learning courses or similar experience is sufficient. > Intermediate Python experience, including object-oriented programming and libraries. Content covered by Python Tutorial (w3schools.com) or similar experience is sufficient.	Python, PyTorch, HuggingFace, Transformers, LangChain, and LangGraph	English	8 hours	$90 (excludes tax, if applicable)	Yes
Sizing LLM Inference Systems	This course teaches AI practitioners to optimize and deploy large language models using NVIDIA NIM microservices. It covers techniques like streaming, prefill, decoding, tensor parallelism, and in-flight batching. You'll learn to benchmark models, select inference hyperparameters, and ensure efficient scaling for real-world applications. > Learn More	> Experience with Python programming. > Fundamentals of AI and machine learning. > Familiarity with LLMs and their applications.	NVIDIA NIM microservices	English	3 hours	$30 (excludes tax, if applicable)	N/A
Synthetic Tabular Data Generation Using Transformers	Synthetic data generation (SDG) is a data-augmentation technique necessary for increasing the robustness of models by supplying training data. In this course, you'll explore the use of transformers for synthetic tabular data generation. > Learn More	> Competency in the Python 3 programming language. > Basic understanding of machine learning and deep learning concepts and pipelines. > Experience building machine learning models with tabular data. > Basic understanding of language modeling and transformers.	NVIDIA NeMo	English	4 hours	$30 (excludes tax, if applicable)	N/A
Techniques for Improving the Effectiveness of RAG Systems	Learn techniques that can take your RAG system from an interesting proof of concept to a serious asset. > Learn More	> Familiarity working with LLM-based applications > Familiarity with RAG pipelines	NVIDIA NIM microservices	English	3 hours	$30 (excludes tax, if applicable)	N/A

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Graphics and Simulation

Course Name	Description	Prerequisites	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
Building a 3D Product Configurator With OpenUSD and Omniverse	In this hands-on lab, you'll unlock the power of OpenUSD to build a real-time configurator in NVIDIA Omniverse. Along the way, you'll learn about workflows, asset considerations, and USD composition concepts that you can apply directly to your own development process. > Learn More	Intermediate Python experience, including object-oriented programming and libraries.	This lab requires a machine with an NVIDIA RTX GPU.	English	2 hours	Free	N/A
Creating and Customizing an Omniverse Extension	Extensions are one of the building blocks of NVIDIA Omniverse Kit-based applications, allowing you to customize your application with functionality and interactivity. In this hands-on lab, you'll create an extension, customize it to make an interactive user interface, and learn how to extract Omniverse application commands to code the extension's functionality. > Learn More	Basic programming skills and familiarity with Python, terminal commands, Github, and computer graphics are useful but not required.	> Git: Download Git and install with default options > VS Code: Standard installation of Visual Studio Code > NVIDIA Omniverse Kit SDK and Kit App Template Repository	English	2 hours	Free	N/A
Develop, Customize, and Publish in Omniverse With Extensions	Customize the NVIDIA Omniverse experience with extensions using Python code. Extensions can be used for a wide variety of modifications, from spawning objects with a button press to applying custom physics on selected objects. Optimize a workflow by copying commonly repeated operations into an extension or add a new way to manipulate objects in the UI. > Learn More	Basic familiarity with Python (helpful, not required) Suggested materials to satisfy prerequisites: The Python Tutorial	NVIDIA Omniverse Code, Visual Studio Code, Python, the Python extension	English	8 hours	Free	Yes
Developing an AI Background Generator With NVIDIA NIM	Supercharge your NVIDIA Omniverse Kit-based application with NVIDIA NIM microservices. > Learn More	> Intermediate Python experience, including object-oriented programming and libraries. Suggested materials to satisfy prerequisites: The Python Tutorial > A basic understanding of 3D applications is useful, but not required.	NVIDIA Omniverse, NVIDIA NIM microservices	English	2 hours	Free	N/A

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Course Name	Description	Prerequisites	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
Developing an Omniverse Kit-Based Application	To build applications from scratch, NVIDIA offers the Omniverse Kit SDK and free templates to build starter applications that can be easily customized and extended. This course provides the fundamentals of using the Omniverse Kit SDK to develop such applications. > Learn More	Basic programming skills, and familiarity with Python, terminal commands, Github, and computer graphics are useful, but not required.	> Git: Download Git and install with default options > VS Code: Standard installation of Visual Studio Code > NVIDIA Omniverse Kit SDK and Kit App Template Repository	English	8 hours	Free	Yes
Developing Robots With Software-in-the-Loop (SIL) in Isaac Sim	In this course, you'll learn the fundamentals of software-in-the-loop (SIL) and how to apply it in robotics development using NVIDIA Isaac Sim and ROS 2. > Learn More	> This is the fourth course in the Getting Started With Isaac Sim learning path. Please complete Synthetic Data Generation for Perception Model Training in Isaac Sim before beginning this course. > Basic Python knowledge and familiarity with robotics concepts.	NVIDIA Isaac Sim, Ros 2	English	2 hours	Free	N/A
Fundamentals of Working With OpenUSD	In this lab, we'll cover the fundamentals of working with Universal Scene Description (OpenUSD). You'll learn how to use USD for nondestructive workflows, how layers can help with ease and speed of scene composition, and how to use USD for data separation and reuse it to accelerate 3D workflows in industrial use cases. > Learn More	An understanding of fundamental programming concepts in Python 3 such as functions, loops, dictionaries, and arrays.	This lab requires a machine with an NVIDIA RTX GPU.	English	2 hours	Free	N/A
Getting Started: Simulating Your First Robot in Isaac Sim	Build foundational skills in robotics simulation and control with NVIDIA Isaac Sim, the first step in the Getting Started With Isaac Sim learning path. > Learn More	> Basic Python knowledge and familiarity with robotics concepts. > A Linux machine meeting Isaac Sim's system requirements is necessary for this course and for properly running simulations.	NVIDIA Isaac Sim	English	1.5 hours	Free	N/A
How to Build a Native OpenUSD XR Application	Learn how to take advantage of Universal Scene Description (OpenUSD) to accelerate your extended reality (XR) development and enhance visual fidelity like never before. This session will equip you with the skills and tools necessary to build, customize, and stream your own OpenUSD native XR applications using NVIDIA Omniverse and NVIDIA CloudXR. > Learn More	Intermediate Python experience, including object-oriented programming and libraries.	This course requires a VR headset and an NVIDIA RTX GPU.	English	2 hours	Free	N/A

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Course Name	Description	Prerequisites
How to Build OpenUSD Applications for Industrial Digital Twins	This lab introduces the basics of the NVIDIA Omniverse development platform. You'll learn how to get started building 3D applications and tools that deliver the functionality needed to support industrial use cases and workflows for aggregating and reviewing large facilities such as factories, warehouses, and more. > Learn More	Intermediate Python experience, including object-oriented programming and libraries.

Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
This lab requires a machine with an NVIDIA RTX GPU.	English	2 hours	Free	N/A

Course Name	Description	Prerequisites
Ingesting Robot Assets and Simulating Your Robot in Isaac Sim	Learn to import robotic assets, add sensors, and run simple simulations. > Learn More	> This is the second course in the Getting Started With Isaac Sim learning path. Please complete Getting Started: Simulating Your First Robot in Isaac Sim before beginning this course. > Basic Python knowledge and familiarity with robotics concepts.

Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
NVIDIA Isaac Sim	English	1 Hour	Free	N/A

Course Name	Description	Prerequisites
Learn OpenUSD: An Introduction to Strength Ordering	This is the seventh course in the Learn OpenUSD: Foundations curriculum, where we're introducing the concept of strength ordering. This course serves as a primer for strength ordering, often referred to by the acronym that governs its rules (LIVRPS). Strength ordering is an important concept for OpenUSD that beginners need to be aware of and will be covered again in depth in more advanced modules of this curriculum. > Learn More	An understanding of fundamental programming concepts in Python 3, such as functions, loops, dictionaries, arrays, and Python 3-related libraries.

Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
OpenUSD	English	45 minutes	Free	N/A

Course Name	Description	Prerequisites
Learn OpenUSD: Asset Structure Principles and Content Aggregation	Explore the fundamental principles of asset structuring and learn how to leverage best practices for your OpenUSD scene organization. > Learn More	> Completion of all courses in the Learn OpenUSD: Foundations curriculum. > An understanding of fundamental programming concepts in Python 3, such as functions, loops, dictionaries, and arrays, and Python 3-related libraries. Understanding of OpenUSD concepts and basic OpenUSD APIs.

Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
OpenUSD	English	3 hours	Free	N/A

Course Name	Description	Prerequisites
Learn OpenUSD: Creating Composition Arcs	Explore the fundamental concepts of USD composition, including layers, sublayers, references, payloads, variant sets, inherits, and specializes. > Learn More	> Completion of all courses in the Learn OpenUSD: Foundations curriculum. > An understanding of fundamental programming concepts in Python 3, such as functions, loops, dictionaries, and arrays, and Python 3-related libraries. Understanding of OpenUSD concepts and basic OpenUSD APIs.

Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
OpenUSD	English	3 hours	Free	N/A

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Course Name	Description	Prerequisites	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
Learn OpenUSD: Developing Data Exchange Pipelines	Explore the fundamentals of OpenUSD data exchange, learn techniques for data extraction and transformation, and gain hands-on experience in asset validation. > Learn More	> Completion of all courses in the Learn OpenUSD: Foundations curriculum. > An understanding of fundamental programming concepts in Python 3, such as functions, loops, dictionaries, and arrays, and Python 3-related libraries. Understanding of OpenUSD concepts and basic OpenUSD APIs.	OpenUSD	English	1.5 hours	Free	N/A
Learn OpenUSD: Learning About Stages, Prims, and Attributes	This is the first course in the Learn OpenUSD: Foundations curriculum, where we're introducing essential concepts, vocabulary, and Python best practices for OpenUSD. In this course, we'll introduce fundamental terms in OpenUSD and get hands-on practice with their implementation in Python. This course is designed for beginners and those with some experience in 3D graphics and OpenUSD. > Learn More	An understanding of fundamental programming concepts in Python 3, such as functions, loops, dictionaries, and arrays, and Python 3-related libraries.	OpenUSD	English	1.5 hours	Free	N/A
Learn OpenUSD: Setting Up Basic Animations	This is the sixth course in the Learn OpenUSD: Foundations curriculum, and it covers basic animation concepts in OpenUSD. In this course, we'll examine how to animate prim properties using OpenUSD concepts like timeCode and timeSample. > Learn More	An understanding of fundamental programming concepts in Python 3, such as functions, loops, dictionaries, and arrays, and Python 3-related libraries.	OpenUSD	English	15 minutes	Free	N/A
Learn OpenUSD: Traversing Stages	This is the fourth course in the Learn OpenUSD: Foundations curriculum, where we introduce essential concepts, vocabulary, and Python best practices for OpenUSD. In this course, we'll introduce several methods for efficiently traversing an OpenUSD stage and get hands-on practice with their implementation in Python. > Learn More	An understanding of fundamental programming concepts in Python 3, such as functions, loops, dictionaries, and arrays, and Python 3-related libraries.	OpenUSD	English	20 minutes	Free	N/A
Learn OpenUSD: Understanding Model Kinds	This is the fifth course in the Learn OpenUSD: Foundations curriculum, and we're discussing model kinds. In this course, we'll explore the types of model kinds and how they can be used to create an efficient model hierarchy in OpenUSD. > Learn More	An understanding of fundamental programming concepts in Python 3, such as functions, loops, dictionaries, and arrays, and Python 3-related libraries.	OpenUSD	English	15 minutes	Free	N/A

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Course Name	Description	Prerequisites	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
Learn OpenUSD: Using Attributes	This is the third course in the Learn OpenUSD: Foundations curriculum, where we introduce essential concepts, vocabulary, and Python best practices for OpenUSD. In this course, we'll expand on the knowledge introduced in the Learning About Stages, Prims, and Properties course to explore attributes more, including how to add, retrieve, and leverage attributes in OpenUSD workflows. > Learn More	An understanding of fundamental programming concepts in Python 3, such as functions, loops, dictionaries, and arrays, and Python 3-related libraries.	OpenUSD	English	45 minutes	Free	N/A
Learn OpenUSD: Working With Prims and Default Schemas	This is the second course in the Learn OpenUSD: Foundations curriculum, where we introduce essential concepts, vocabulary, and Python best practices for OpenUSD. In this course, we will discuss what it means to create a prim without a schema and review prebuilt default schemas that already exist in OpenUSD. > Learn More	An understanding of fundamental programming concepts in Python 3, such as functions, loops, dictionaries, and arrays, and Python 3-related libraries.	OpenUSD	English	30 minutes	Free	N/A
Synthetic Data Generation for Perception Model Training in Isaac Sim	Learn to train and deploy perception models using synthetic data generation (SDG), applying domain randomization and simulation for real-world robotics. > Learn More	> This is the third course in the Getting Started With Isaac Sim learning path. Please complete Ingesting Robot Assets and Simulating Your Robot in Isaac Sim before beginning this course. > Basic Python knowledge and familiarity with robotics concepts.	NVIDIA Isaac Sim	English	2 hours	Free	N/A
Synthetic Data Generation for Training Computer Vision Models	How much data is enough? This is a common question when fine-tuning or training computer vision models. In cases where data collection is a limiting factor, we can use synthetic data. NVIDIA Omniverse Replicator streamlines synthetic data generation (SDG) using 3D assets into a single application, with the ability to modify the appearance and format of the data. This lab highlights one of the ways deep learning tools and Omniverse can be used together to streamline deep learning workloads. > Learn More	> Intermediate understanding of Python (including classes, objects, and decorators): Learn about this topic in the Python.org tutorials > Basic understanding of machine learning and deep learning concepts and pipelines: Learn about this topic from the "Deep Learning Demystified" video	NVIDIA Omniverse Replicator, NVIDIA Triton Inference Server, PyTorch	English	3 hours	$30 (excludes tax, if applicable)	N/A

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Course Name	Description	Prerequisites
Transferring Robot Learning Policies From Simulation to Reality	Learn the principles of developing effective robot learning policies. **>** Learn More	None

Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
NVIDIA Isaac	English	1 hour	Free	N/A

Infrastructure

Course Name	Description	Prerequisites
AI Infrastructure and Operations Fundamentals	Explore AI, GPU computing, NVIDIA AI software architectures and how to implement and scale AI workloads in the enterprise data center. **>** Learn More	None

Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam
Artificial intelligence, machine learning, deep learning, GPU hardware and software	English	7 hours	$50 (excludes tax, if applicable)	Available

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Instructor-Led Workshops for Administrators

AI and Data Science

AI Infrastructure and Operations: Professional Public Training

Hands-on training course that explores configuration, management, and troubleshooting of AI infrastructure and operations.

> Learn More

Prerequisites

- Knowledge of networking concepts and principles, including Ethernet and InfiniBand technologies.
- Experience in Linux-like systems administration.
- Basic understanding of server hardware, storage concepts and principles, virtualization technologies, and artificial intelligence concepts and terminology.
- We recommend the AI Infrastructure and Operation Fundamentals self-paced course.

Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam
N/A	English	44 hours	$5,500 (excludes tax, if applicable)	Available

AI Infrastructure Professional: Public Training

Hands-on training course that explores optimizing efficiency, reliability, and scalability for deploying AI environments.

> Learn More

Prerequisites

- Knowledge of networking concepts and principles, including Ethernet and InfiniBand technologies.
- Experience in Linux-like systems administration.
- Basic understanding of server hardware, storage concepts and principles, virtualization technologies, and artificial intelligence concepts and terminology.
- We recommend the AI Infrastructure and Operation Fundamentals self-paced course.

Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam
N/A	English	28 hours	$3,000 (excludes tax, if applicable)	Available

AI Operations Professional: Public Training

Hands-on training course that explores operating AI data centers, including provisioning and management, running AI workloads, and implementing AI virtualization.

> Learn More

Prerequisites

- Knowledge of networking concepts and principles, including Ethernet and InfiniBand technologies.
- Experience in Linux-like systems administration.
- Basic understanding of server hardware, storage concepts and principles, virtualization technologies, and artificial intelligence concepts and terminology.
- We recommend the AI Infrastructure and Operation Fundamentals self-paced course.

Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam
N/A	English	24 hours	$3,000 (excludes tax, if applicable)	Available

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Workshop Name	Description	Prerequisites			
NVIDIA AI Enterprise Administration: Public Training	This hands-on training course explores architecture, installation, configuration, operation, and management of NVIDIA AI Enterprise. **>** Learn More	None			
	Tools, Libraries, Frameworks	**Languages**	**Duration**	**Price**	**Certification Exam**
	N/A	English	24 hours	$3,000 (excludes tax, if applicable)	N/A

Cluster Administration

NVIDIA Base Command Manager	This course provides an overview of NVIDIA Base Command Manager, including managing nodes and software images, monitoring devices and jobs, managing users, and configuring workload managers. **>** Learn More	None			
	Tools, Libraries, Frameworks	**Languages**	**Duration**	**Price**	**Certification Exam**
	NVIDIA Base Command Manager	English	12 hours	Contact us	N/A

Ethernet Cumulus

NVIDIA Cumulus Linux: Public Bootcamp	Learn how to install, deploy, configure, and troubleshoot Cumulus-based networks. This course offers a perfect blend of hands-on training and theoretical education. **>** Learn More	None			
	Tools, Libraries, Frameworks	**Languages**	**Duration**	**Price**	**Certification Exam**
	NVIDIA Cumulus Linux switches	English	12 hours	$1,500 (excludes tax, if applicable)	Available
NVIDIA Cumulus: Private Workshop	In this hands-on private training, you'll learn about NVIDIA Cumulus OS architecture and installation, configuration, operation, and management of Cumulus Linux running on NVIDIA switches. **>** Learn More	None			
	Tools, Libraries, Frameworks	**Languages**	**Duration**	**Price**	**Certification Exam**
	NVIDIA Cumulus Linux switches	English	20 hours	Contact us	Available
NVIDIA Cumulus Linux: Customized Advanced Training	This course focuses on how to build and operate a state-of-the-art data center or storage fabric with emphasis on troubleshooting. The course covers advanced topics such as filtering, quality of service (QoS), Ethernet VPN multihoming (EVPN-MH), monitoring, and active testing. **>** Learn More	None			
	Tools, Libraries, Frameworks	**Languages**	**Duration**	**Price**	**Certification Exam**
	NVIDIA Cumulus Linux switches	English	12 hours	Contact us	N/A

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Workshop Name	Description	Prerequisites			
InfiniBand					
InfiniBand: Customized Course	In this course, you'll learn about InfiniBand architecture and how to manage, monitor, and troubleshoot your InfiniBand network. > Learn More	Network administrators and IT professionals that need to install, configure, manage, monitor, and troubleshoot the configuration and performance of InfiniBand networks.			
	Tools, Libraries, Frameworks	**Languages**	**Duration**	**Price**	**Certification Exam**
	InfiniBand networks	English	16 hours	Contact us	Available
InfiniBand: Professional Customized Training	In this course, you'll learn about InfiniBand and NVIDIA Cumulus architecture and how to manage, monitor, and troubleshoot triad deployment-based networks. > Learn More	None			
	Tools, Libraries, Frameworks	**Languages**	**Duration**	**Price**	**Certification Exam**
	InfiniBand networks	English	16 hours	Contact us	N/A
NVIDIA DGX					
NVIDIA DGX H200/H100/A100 Administration: Private Workshop	This course provides an overview of NVIDIA DGX systems, tools for in-band and out-of-band management, NVIDIA NGC, the basics of running workloads, and specific management tools and command-line interface (CLI) commands. In addition, this course includes content on Multi-Instance GPU (MIG), managing storage, performance validation, and other system management tools and concepts. > Learn More	System and network administrators and IT professionals that need to configure and verify the configuration and performance of DGX systems.			
	Tools, Libraries, Frameworks	**Languages**	**Duration**	**Price**	**Certification Exam**
	NVIDIA DGX H200/H100/A100	English	16 hours	Contact us	N/A
NVIDIA DGX H200/H100/A100 Administration: Public Workshop	This course provides an overview of DGX systems and tools for in-band and out-of-band management, the basics of running workloads, specific management tools, and CLI commands. > Learn More	System and network administrators and IT professionals that need to configure and verify the configuration and performance of DGX systems.			
	Tools, Libraries, Frameworks	**Languages**	**Duration**	**Price**	**Certification Exam**
	NVIDIA DGX H200/H100/A100	English	16 hours	$1,500 (excludes tax, if applicable)	N/A

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Workshop Name	Description	Prerequisites
NVIDIA DGX BasePOD Administration: Private Workshop	This course provides an overview of DGX BasePOD components and related processes, including the NVIDIA DGX A100 system, InfiniBand and Ethernet networks, tools for in-band and out-of-band management, NGC, the basics of running workloads, and specific management tools and CLI commands. It includes instructions for managing vendor-specific storage per the architecture of your specific DGX BasePOD solution. **>** Learn More	System and network administrators and IT professionals that need to configure and verify the configuration and performance of DGX A100 clusters.

Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam
NVIDIA DGX BasePOD cluster	English	16 hours	Contact us	N/A

Workshop Name	Description	Prerequisites
NVIDIA DGX SuperPOD Administration: Private Workshop	This course is designed to help IT professionals successfully administer all aspects of a DGX SuperPOD cluster, including compute, storage, and networking. **>** Learn More	System and network administrators and IT professionals that need to configure and verify the configuration and performance of DGX SuperPOD clusters.

Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam
NVIDIA DGX SuperPOD cluster	English	16 hours	Contact us	N/A

Virtualization

Workshop Name	Description	Prerequisites
NVIDIA AI Enterprise Administration: Public Bootcamp	This course covers the platform and solution overview, hardware and software architecture, deployment options, licensing, temporal and spatial GPU partitioning, scaling, comprehensive validation, management, maintenance, monitoring, and troubleshooting. **>** Learn More	System administrators and IT professionals that need to install, configure, manage, monitor, and troubleshoot the configuration and performance of their NVIDIA AI Enterprise solution.

Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam
NVIDIA AI Enterprise	English	12 hours	$1,500 (excludes tax, if applicable)	N/A

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Online, Self-Paced Courses for Administrators

AI and Data Science

AI for All—From Basics to Gen AI Practice

This introductory course provides invaluable insights into the evolving landscape of AI. Whether you're a seasoned professional or just beginning your journey into AI, this course is essential for staying ahead in today's rapidly evolving technological landscape.

> Learn More

Prerequisites: None

Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam
N/A	English	-	Free	N/A

AI Infrastructure and Operations Fundamentals

In this course, we'll start with an introduction to AI, where we'll cover basic AI concepts and principles. Then we'll delve into data center and cloud infrastructure before exploring AI operations.

> Learn More

Prerequisites: None

Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam
N/A	English	7 hours	$50 (excludes tax, if applicable)	Available

NVIDIA AI Enterprise Administration

This course covers the platform and solution overview, hardware and software architecture, deployment options, licensing, temporal and spatial GPU partitioning, scaling, comprehensive validation, management, maintenance, monitoring, and troubleshooting.

> Learn More

Prerequisites: To gain the most value from this course, the target audience should have working knowledge in the following domains:

> Data center infrastructure: servers, storage, networking, GPUs, operating systems.
> Virtualization: VMware vSphere.
> Containerization: Docker.

Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam
NVIDIA AI Enterprise	English	8 hours	$100 (excludes tax, if applicable)	N/A

Cluster Administration

NVIDIA Base Command Manager

This course is based on NVIDIA Base Command Manager and gives an overview of the cluster management tools, Bright View, and cluster management shell (CMSH).

> Learn More

Prerequisites: None

Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam
NVIDIA Base Command Manager	English	5 hours	Free	N/A

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Course Name	Description	Prerequisites	Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam
Base Command Manager Autoscaling Hybrid Cloud	This course is based on NVIDIA Base Command Manager and gives an overview of extending the cluster to the cloud with cluster-as-a-service and cluster extension (i.e., hybrid cloud). > Learn More	None	NVIDIA Base Command Manager	English	3 hours	Free	N/A
Introduction to Base Command Manager	This course is based on NVIDIA Base Command Manager and gives an overview of the usage and components of the software. > Learn More	None	NVIDIA Base Command Manager	English	3 hours	Free	N/A

Ethernet

Course Name	Description	Prerequisites	Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam
Network Administration With the NVIDIA Onyx Switch System	This course provides the required set of skills to configure and manage NVIDIA Ethernet switch systems. You'll learn in depth layer 2 configurations such as virtual local area network (VLAN), Spanning Tree Protocol (STP), link aggregation (LAG), and multi-chassis link aggregation (MLAG), as well as how to configure layer 3 features such as Border Gateway Protocol (BGP). > Learn More	> Basic understanding of Ethernet network principles. > Basic understanding of switching and routing concepts.	NVIDIA Onyx	English	3 hours	$100 (excludes tax, if applicable)	N/A
RDMA Over Converged Ethernet (RoCE) From A to Z	In this course, you'll learn what RoCE is, how it works, the different network types RoCE can run over, and how to configure RoCE for each network type. > Learn More	Basic understanding of networking concepts and the Open Systems Interconnection (OSI) model.	RoCE	English	2 hours	Free	N/A

InfiniBand

Course Name	Description	Prerequisites	Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam
InfiniBand Essentials	This self-paced course covers the fundamental first steps into the world of InfiniBand. If you're looking to become more familiar with InfiniBand's benefits, uses, architecture layers, and management concepts, this is the best place to start. > Learn More	General understanding of networking concepts and principles.	InfiniBand	English	1.5 hours	Free	N/A

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Course Name	Description	Prerequisites
InfiniBand Professional	This course covers the fundamentals of the InfiniBand technology from a usability point of view and builds on the details of the InfiniBand architecture specification. You'll learn how to install, configure, manage, troubleshoot, and monitor your InfiniBand network. > Learn More	General understanding of networking concepts and principles.

Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam
InfiniBand	English	6 hours	$200 (excludes tax, if applicable)	Available

Management

Course Name	Description	Prerequisites
Data Center Management Made Easy With NVIDIA UFM	Learn about NVIDIA Unified Fabric Manager (UFM) and its capabilities, advantages, and components through a set of interactive learning units, videos, and simulators. > Learn More	Understanding of InfiniBand fabrics and management concepts.

Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam
N/A	English	3 hours	$50 (excludes tax, if applicable)	N/A

Course Name	Description	Prerequisites
NVIDIA License System	NVIDIA License System (NLS) is a new licensing solution that supports the continued expansion of the NVIDIA enterprise software portfolio. This course will help you learn about NLS and how you can move from your existing licensing solution to NLS. > Learn More	> Basic understanding of virtual appliances installation and setup. > Familiarity with web/cloud-based applications. > Familiarity with NVIDIA products like virtual GPU (vGPU) and NVIDIA AI Enterprise.

Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam
Cloud License Service (CLS) and Delegated License Service (DLS)	English	2 hours	Free	N/A

Network

Course Name	Description	Prerequisites
Ansible Essentials for Network Engineers	In this course, you'll explore a variety of Ansible modules and write playbooks specifically adapted to modern data centers. This course includes an exclusive hands-on lab environment and exercises to practice real-world scenarios in real cloud environments. > Learn More	> Basic Linux administration. > General understanding of networking concepts and principles.

Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam
Ansible	English	3 hours	$50 (excludes tax, if applicable)	N/A

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Course Name	Description	Prerequisites			
Introduction to Networking	In this course, we'll cover the basics of Ethernet technology and understand how data is forwarded in an Ethernet network. **>** Learn More	None			
	Tools, Libraries, Frameworks	**Languages**	**Duration**	**Price**	**Certification Exam**
	N/A	English	1 hour	Free	N/A
MLXlink and MLXcables Debug Tools	In this course, you'll learn about the MLXlink and MLXcables debug tools. These debug tools are used for both basic link troubleshooting and for analyzing more complex link characteristics. **>** Learn More	Good technical background and understanding of networking hardware.			
	Tools, Libraries, Frameworks	**Languages**	**Duration**	**Price**	**Certification Exam**
	MLXLink and MLXcables	English	2 hours	Free	N/A
NVIDIA BlueField DPU Administration	Learn the basic concepts of BlueField DPUs as a platform for accelerated data center computing. **>** Learn More	**>** Basic knowledge and experience in networking concepts and principles. **>** Basic knowledge and experience in Linux administration.			
	Tools, Libraries, Frameworks	**Languages**	**Duration**	**Price**	**Certification Exam**
	N/A	English	3 hours	$50 (excludes tax, if applicable)	N/A
RDMA					
The Fundamentals of RDMA Programming	This course allows C programmers to dive into the remote direct-memory access (RDMA) programming world without previous experience in networking or RDMA programming. We've also added tips and tricks, as well as do's and don'ts, so the skills you acquire will truly serve you when you need them. **>** Learn More	Understanding of C/C++ programming.			
	Tools, Libraries, Frameworks	**Languages**	**Duration**	**Price**	**Certification Exam**
	RDMA, C/C++	English	4 hours	$50 (excludes tax, if applicable)	N/A

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Certifications

Certification Name	Description	Prerequisites
NVIDIA-Certified Associate: AI Infrastructure and Operations	This is an entry-level credential that validates the foundational concepts of AI computing related to infrastructure and operations. The exam is online and proctored remotely, includes 50 questions, and has a 60-minute time limit. **>** Learn More	A basic understanding of data center infrastructure.

Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam
N/A	English	1 hour	$135 (excludes tax, if applicable)	Available

Certification Name	Description	Prerequisites
NVIDIA-Certified Associate: Generative AI Large Language Models	An entry-level credential that validates the foundational concepts for developing, integrating, and maintaining AI-driven applications using generative AI and large language models (LLMs) with NVIDIA solutions. The exam is online and proctored remotely, includes 50 questions, and has a 60-minute time limit. **>** Learn More	A basic understanding of generative AI and large language models.

Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam
N/A	English	1 hour	$135 (excludes tax, if applicable)	Available

Certification Name	Description	Prerequisites
NVIDIA-Certified Associate: Generative AI Multimodal	An entry-level credential that validates the foundational skills needed to design, implement, and manage AI systems that synthesize and interpret data across text, image, and audio modalities. The exam is online and proctored remotely, includes 50 questions, and has a 60-minute time limit. **>** Learn More	A basic understanding of generative AI.

Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam
N/A	English	1 hour	$135 (excludes tax, if applicable)	Available

Certification Name	Description	Prerequisites
NVIDIA-Certified Professional: AI Operations	This is is an intermediate-level credential that validates a candidate's ability to monitor, troubleshoot, and optimize AI infrastructure by NVIDIA. The exam is online and proctored remotely, includes 50 questions, and has a 90-minute time limit. **>** Learn More	Two to three years of operational experience working in a data center with NVIDIA hardware solutions. The candidate should be able to monitor and manage all the parts of a data center infrastructure in support of AI workloads.

Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam
N/A	English	1.5 hours	$400 (excludes tax, if applicable)	Available

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Certification Name	Description	Prerequisites
NVIDIA-Certified Professional: AI Infrastructure	This is an intermediate-level credential that validates a candidate's ability to deploy, manage, and maintain AI infrastructure by NVIDIA. The exam is online and proctored remotely, includes 65 questions, and has a 90-minute time limit. > Learn More	Two to three years of operational experience working in a data center with NVIDIA hardware solutions. The candidate should be able to deploy all the parts of a data center infrastructure in support of AI workloads.

Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam
N/A	English	1.5 hours	$400 (excludes tax, if applicable)	Available

Certification Name	Description	Prerequisites
NVIDIA-Certified Professional: InfiniBand	This is an intermediate-level certification that validates core concepts for designing, deploying, and managing NVIDIA InfiniBand fabrics. The exam is online and proctored remotely, includes 40 questions, and has a 90-minute time limit. > Learn More	A thorough understanding of data center infrastructure and networking.

Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam
NVIDIA InfiniBand fabrics	English	1.5 hours	$220 (excludes tax, if applicable)	Available

Ready to Get Started?

To get started with hands-on training, visit nvidia.com/en-us/learn/organizations

For questions, contact us.

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