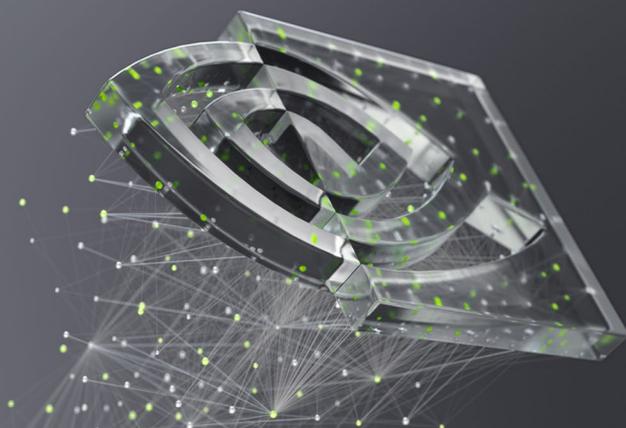




INVENT THE FUTURE WITH US



YOUR FUTURE STARTS HERE

NVIDIA's invention of the GPU sparked the PC gaming market. The company's pioneering work in accelerated computing—a supercharged form of computing at the intersection of computer graphics, high performance computing and AI—is reshaping trillion-dollar industries, such as transportation, healthcare and manufacturing, and fueling the growth of many others.

FIND YOUR PERFECT FIT

There are endless opportunities at NVIDIA, and you have the freedom to explore them all. It is all about landing where you are the most valued, challenged, and inspired in your work.

Below are general hiring areas for NVIDIA. Check out where your skills fit and search for your area of interest at www.nvidia.com/university for more specific roles.

HARDWARE

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| ASIC DESIGN | <ul style="list-style-type: none">> Familiar with digital systems, VLSI design, computer architecture, computer arithmetic, CMOS transistors, and circuits <p>Programming Skills: Verilog/VHDL, C/C++, Perl</p> |
| VERIFICATION | <ul style="list-style-type: none">> Experience or relevant coursework in GPU or processor verification/validation> Experience or relevant coursework with directed/random functional testing including writing test plans and directed/random diagnostics> Experience or relevant coursework developing software infrastructure for validation of architecture <p>Programming Skills: Verilog, C/C++/UVM, Perl</p> |
| PHYSICAL DESIGN | <ul style="list-style-type: none">> Understanding of Synthesis, static timing analysis, clock/power distribution and analysis, RC extraction and correlation, place and route, and circuit design and analysis> Tools: ICC2, Design Compiler, PrimeTime from Synopsys and First Encounter, Innovus, Virtuso from Cadence <p>Programming Skills: Perl, C, C++, TCL, Scheme, Python, SKILL and Make</p> |

ARCHITECTURE

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| COMPUTER ARCHITECTURE | <ul style="list-style-type: none">> Knowledge and coursework in computer architecture, and one or more of focused areas (computer graphics, deep learning, ray tracing, parallel programming, memory architecture, and high-performance computing systems)> Passion for learning/developing functional and performance simulators> Understanding workload/architecture interactions, and analyzing RTL and silicon behavior> Experience in one or more of these following fields: PC/Workstation/console graphics, hardware/software development, HPC (MPI, OpenMP), robotics, self-driving cars, rendering, or computervision <p>Programming Skills: C++, scripting languages (Python, Perl), modern graphics APIs (DirectX, OpenGL, Vulkan), modern GPGPU APIs (CUDA, OpenCL), revision control (Perforce, Git)</p> |
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SOFTWARE

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| COMPILER | <ul style="list-style-type: none">> Compiler development, compiler test experience, or coursework> Knowledge of open source projects like CLANG, LLVM, or gcc> Knowledge of high-performance computing> Experience in testing production software or test automation> Experience with deep learning compilers, e.g. XLA, TVM, Halide <p>Programming Skills: C++, C, CUDA, Python</p> |
| SYSTEMS SOFTWARE | <ul style="list-style-type: none">> Familiarity with operating system concepts (threads, process control, memory/resource management, virtual memory, etc.)> Experience writing and debugging multithreaded programs> Familiarity with computer system architecture and microprocessor fundamentals (caches, buses, memory controllers, DMA, etc.)> Experience with kernel development (Linux, QNX, or Windows) or RTOS development on embedded platforms> Knowledge of data structures and algorithm time/space complexity <p>Programming Skills: C, C++</p> |
| GRAPHICS SYSTEMS SOFTWARE | <ul style="list-style-type: none">> Excellent math skills and theory knowledge> Familiar with 3D/2D graphics theory, implementation, and optimizations> Simulation or emulation experience – writing and debugging tests> Knowledge of computer architecture (e.g.: x86, ARM CPUs, GPUs)> Experience in device drivers, operating systems, real-time systems, game console middleware, or other low-level library development> Very strong problem solving and debugging skills <p>Programming Skills: C, C++, Direct3D, Vulkan, OpenGL, OpenCL, CUDA</p> |
| SOFTWARE CLOUD | <ul style="list-style-type: none">> Experience with development of high quality and highly distributed cloud-based RESTful web services> Experience with cloud infrastructure, cloud-scale software, CI/CD, and automation/scripting skills> Understanding of cloud design in the areas of virtualization/global infrastructure, distributed systems, load balancing, and security> Data and performance analysis tools, debugging skills, and system virtualization skills> Experience with kernel development for Linux, Android, Chrome, or Windows> Knowledge of Kubernetes and Docker <p>Programming Skills: C++, Java</p> |

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| <p>SOFTWARE SECURITY</p> | <ul style="list-style-type: none"> > Harden and develop secure solutions across our software stack – spanning multi-node supercomputers down to microcontrollers and security co-processors > Build tools and infrastructure to scale security efforts across large organizations and codebases with millions of lines of code > Knowledge of operating and system software, secure design principles, with understanding of common vulnerability and mitigation patterns > Exposure to security methods like static/dynamic analysis, fuzzing, negative testing, and design analysis such as threat modeling or attack trees > Experience with trusted computing or formal verification technologies and tools, e.g. SPARK, Frama-C <p>Programming Skills: C, C++, SPARK, Frama-C, Scripting languages (Python, Bash), Fuzzing tools (AFL, libFuzzer), Data processing (Kibana, Grafana), CI/CD (Jenkins)</p> |
| <p>SOFTWARE TOOLS INFRASTRUCTURE</p> | <p>A software team that enables architects to build next generation of amazing hardware.</p> <p>GPU Development Tools</p> <ul style="list-style-type: none"> > Model, analyze, and debug the development of next generation GPU hardware and drive performance improvements <p>Programming Skills: OOP, C++, Python, Perl and/or Graphics & GPGPU APIs (Vulkan, DirectX, OpenGL, CUDA, OpenCL)</p> <p>Chip Design, Validation, and Workflow Tools</p> <ul style="list-style-type: none"> > Develop software to enable the design and validation of NVIDIA's next generation of chips to support the hardware design lifecycle <p>Programming Skills: C++, Python, Unix shell, CS theory (e.g. graphs, compiler design, operating systems, distributed systems, micro-services architecture, logic synthesis, or simulation)</p> <p>Metrics, Process Management, and Compute Infrastructure</p> <ul style="list-style-type: none"> > Work on distributed/scalable application and system designs to enable NVIDIA's chip design process <p>Programming Skills: Scripting languages (Python, Go, Javascript), Data processing (ElasticSearch, Kibana, Grafana, MongoDB), Java, Gitlab, Jenkins</p> |

ARTIFICIAL INTELLIGENCE

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| DEEP LEARNING APPLICATIONS AND ALGORITHMS | <ul style="list-style-type: none">> Solid knowledge of deep neural networks with experience in developing deep learning frameworks such as PyTorch and TensorFlow> Understanding of mathematical fundamentals (linear algebra/numerical methods) and/or computer vision areas> Solid foundations of software design, computer memory model (disk, memory, caches), CPU and GPU architectures, networking, and numeric libraries> Experience in design and development of embedded systems, drivers, and real-time software <p>Programming Skills: Python, C, C++, CUDA NVIDIA Projects: Riva (Conversational AI), Metropolis (Smart Cities), Clara (Medical Imaging), and more</p> |
| AUTONOMOUS VEHICLES | <ul style="list-style-type: none">> Experience with training frameworks (Tensorflow, Keras, or Pytorch)> Background in one or more of the following: computer vision, mapping/localization, SLAM, sensor input devices (LiDAR, cameras, radars), image processing/segmentation <p>Programming Skills: C/C++, Python, CUDA NVIDIA Projects: DRIVE</p> |
| ROBOTICS | <ul style="list-style-type: none">> Experience working with autonomous vehicles or robotics stack> Experience with simulators, designing and building validation frameworks for machine learning/deep learning, and working with cloud technologies> Good operating systems and data structure knowledge (threads, processes, memory, and synchronization)> ROS, physics simulation software, computer graphics, version control, and computer vision <p>Programming Skills: C/C++, Python, CUDA, OpenGL NVIDIA Projects: Isaac SDK, Isaac Sim, Omniverse, Jetson AGX Xavier</p> |
| DEEP LEARNING FRAMEWORKS AND LIBRARIES | <ul style="list-style-type: none">> Building underlying frameworks and libraries that accelerate deep learning on GPUs> Experience with performance-oriented parallel programming, optimizing for high performance computing, or algorithms/numerical methods fundamentals> Experience with one or more of the following: Docker containers, computer architecture, large complex codebases <p>Programming Skills: Python, C, C++, CUDA NVIDIA Projects: Deep Learning Frameworks, TensorRT, cuDNN</p> |

RESEARCH

RESEARCH

- > PhD candidacy in CS, CE, EE, mathematics, physics, signal processing, statistics, neuroscience, or equivalent research experience in those fields
- > Track record of research excellence with a strong publication record
- > Familiarity with deep learning frameworks such as PyTorch or TensorFlow
- > Knowledge of applications areas such as parallel algorithms, parallel programming systems, computer vision, robotics, NLP, or recommender systems

Programming Skills: Python, MATLAB, C, C++, CUDA

Check out research areas [here](#)

APPLIED RESEARCH

- > Deep learning: theory and applications to NLP, Computer Vision, Graphics, Speech, Reinforcement Learning, or another domain
- > Experience with deep learning frameworks such as PyTorch or Tensorflow

Programming Skills: Python and C/C++

TECHNICAL SALES

SOLUTIONS ARCHITECT

This is a rotational program where New College Graduates will spend 18 months rotating quarterly through customer-facing teams supporting different industries such as hyperscale cloud service providers, automotive, retail, healthcare, and finance.

- > Graduating with a BS or MS degree in a related technical field, or an advanced degree/MBA program
- > Knowledge of Software and Hardware business models
- > Analytical, marketing, and project management skills
- > Familiarity with deep learning frameworks such as PyTorch or TensorFlow
- > Excellent communication and presentation skills

Programming Skills: C, C++, Python, CUDA

BUSINESS/OPERATIONS

We have roles in product management, marketing, finance, and operations across multiple teams at NVIDIA.

Whether you are pursuing a BS, MS, or PhD in a related field OR currently enrolled in an MBA program, we are looking for diverse talent to come make an impact in these roles.

WHAT WE DO.

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|---|----------------------------|
| Autonomous Machines | Healthcare |
| Cloud and Data Center | High Performance Computing |
| Deep Learning and Artificial Intelligence | Self-Driving Cars |
| Design and Pro Visualization | Gaming and Entertainment |

WHERE WE WORK.

- > Austin, TX
- > Bethesda, MD
- > Boulder, CO
- > Champaign, IL
- > Durham, NC
- > Hillsboro, OR
- > Holmdel, NJ
- > New York, NY
- > Pittsburgh, PA
- > Redmond, WA
- > Santa Clara, CA
- > Seattle, WA
- > Toronto, Canada
- > Westford, MA

A TRULY INCLUSIVE CULTURE.

- > **EVERYONE IS WELCOME.** Every background offers a new perspective that can only help us grow smarter and better.
- > **EVERYONE HAS A VOICE.** Great ideas drive us, no matter who or where they come from.

HOW TO APPLY.

- 1. EXPLORE INTERNSHIP AND NEW COLLEGE GRADUATE OPPORTUNITIES.** Check out our general hiring areas above and see where your skills and interests may fit. Search for your area of interest at www.nvidia.com/university and apply directly there!
- 2. GET NOTICED.** Make sure your resume aligns with the roles you're interested in. Our teams like to see your technical and programming skills through cool projects.
- 3. HEAR BACK.** Once your online application has been submitted; you will hear back within 2-3 weeks if there is a match.

If you met us at an event or career fair, you still need to apply online.