LLVM Compiler Engineer – Intern

NVIDIA's invention of the GPU 1999 sparked the growth of the PC gaming market, redefined modern computer graphics, and revolutionized parallel computing. More recently, GPU deep learning ignited modern AI — the next era of computing — with the GPU acting as the brain of computers, robots, and self-driving cars that can perceive and understand the world. Today, we are increasingly known as "the AI computing company".

We are looking for a **LLVM Compiler Intern** for an exciting and fun role in our GPU Software organization. Our Compiler team is responsible for constructing and emitting the highest performance GPU machine instructions for Graphics (OpenGL, Vulkan, DX) and Compute (CUDA, PTX, OpenCL, Fortran, C++). This team is comprised of worldwide leading compiler engineering experts who provide leading edge performance and capabilities for NVIDIA's current and future complex parallel SIMT architectures.

What you will be doing

- Understand, modify, and improve an NVIDIA proprietary GPU compiler and assembler written in C++
- Design and develop new compiler passes and optimizations to produce best-in-class, robust, supportable compiler and tools
- Work with global compiler, hardware and application teams to oversee improvements and problem resolutions
- Be part of a team that is at the centre of deep-learning compiler technology spanning architecture design and support through functional languages

What we need to see

- Pursuing B.Tech or higher degree in Computer Science/Engineering (or equivalent experience)
- Excellent hands-on C++ programming skills
- Strong background in software engineering principles with a focus on crafting robust and maintainable solutions to challenging problems
- Good communication and documentation skills and self-motivated

Ways for you to stand out from the crowd

- Prior experience with compiler development or compiler code generation.
- Experience in developing CUDA, DirectX, OpenGL/Vulkan applications

NVIDIA is widely considered to be one of the technology world's most desirable employers. We have some of the most forward-thinking and hardworking people in the world working for us. If you're creative and autonomous, we want to hear from you!

NVIDIA is committed to fostering a diverse work environment and proud to be an equal opportunity employer. As we highly value diversity in our current and future employees, we do not discriminate (including in our hiring and promotion practices) on the basis of race, religion, colour, national origin, gender, gender expression, sexual orientation, age, marital status, veteran status, disability status or any other characteristic protected by law.