



Job Title: Senior or Staff (DOE) Edge-AI Engineer

Location: Fargo

We don't just support innovation—we drive it.

At NDeavor, we are catalysts for innovation, engineering cutting-edge autonomous mobile equipment, robotics, and intelligent systems. With roots dating back to 1999 as North Dakota's innovation epicenter, today we collaborate with global industry leaders, dynamic startups, and critical military programs. Our work spans precision agriculture, defense, energy, and beyond—solving complex challenges in rugged off-road environments through innovative autonomous solutions.

Position Overview:

We are seeking a Senior or Staff Edge-AI Engineer to design, develop, and deploy intelligent software systems that run reliably on embedded and edge-compute platforms. This role sits at the intersection of embedded systems, robotics, and applied AI, with a strong emphasis on bringing advanced perception, reasoning, and autonomy capabilities out of the cloud and onto real-world machines.

The ideal candidate combines deep embedded software expertise with practical experience building and optimizing AI-enabled systems for resource-constrained environments. You will work across the full stack—from low-level software and hardware interfaces to real-time inference pipelines and system integration—helping deliver robust edge AI solutions for autonomous and robotic platforms operating in demanding field conditions.

Key Responsibilities:

Architect and optimize embedded and edge software for autonomous and robotic systems; build AI inference pipelines for embedded Linux and real-time systems; integrate vision, speech, sensor fusion, and planning capabilities; deploy and tune ML models for resource-constrained hardware; develop interfaces for peripherals and communication systems; support integration, testing, validation, and field deployment; debug hardware/software performance issues; and help guide technical architecture for edge AI platforms.

Core Technologies You'll Use:

C/C++/Rust, Python, Bash; embedded Linux and RTOS platforms; ARM/x86/RISC-V architectures; vLLM, ONNX, TensorRT, TensorFlow Lite, OpenCV; ROS/ROS 2, DDS, GStreamer; Ethernet, USB, CAN, SPI, I2C, UART, GPIO, PWM; Git, CMake, Docker, CI/CD, and embedded debugging/profiling tools.

Qualifications:

- Bachelor's or Master's degree in Computer Science, Electrical Engineering, Robotics, Computer Engineering, or a related technical field, or equivalent practical experience.
- 5+ years of experience developing embedded software systems.
- Strong C/C++ and Python skills for embedded/systems/ML development and testing.
- Experience with embedded Linux and/or real-time operating systems.
- Experience deploying software on resource-constrained edge or embedded hardware.
- Experience integrating AI/ML into production systems where performance/reliability matters.
- Experience working with hardware interfaces like Ethernet, USB, CAN, SPI, and I2C.
- Strong debugging and performance analysis skills across software, OS, and hardware.
- Comfortable executing field tests—lifting, wrenching, and troubleshooting on-site.
- Excellent problem-solving, analytical, and communication skills.
- A versatile engineer able to work across disciplines, demonstrating both broad technical capability and deep expertise in embedded and intelligent systems.
- U.S. Person (ITAR/EAR)

Preferred Qualifications:

- Experience deploying or optimizing ML models on embedded or edge devices.
- Familiarity with AI workloads such as automatic speech recognition, language-enabled reasoning systems, computer vision, multimodal perception, or robotic decision support.
- Experience with ROS/ROS 2 and complex robotic or autonomous systems.
- Experience with GPU, NPU, TPU, DSP, or other on-device AI acceleration.
- Familiarity with model optimization techniques such as quantization, pruning, TensorRT, ONNX, TFLite, or similar deployment toolchains.
- Experience with hardware/software integration, profiling tools, and low-level debugging.
- Knowledge of Agile methodologies, automated testing, and test-driven development.
- Experience with CI/CD pipelines and modern software release practices.
- Background in agricultural, defense, or heavy-equipment industries.

Bold Vision, Boundless Impact. Join us and see where it takes you.

At NDeavor, we empower innovators. You'll work on meaningful, high-impact projects that bring advanced intelligence to real-world systems operating in demanding environments. This is an opportunity to help shape the future of edge AI in robotics and autonomy—building software that moves beyond prototypes and into rugged, deployed platforms where performance matters.

Here, innovation is continuous, and your contributions directly drive our collective success.

Be part of our bold vision. Join NDeavor and redefine the future of intelligent systems.

To Apply: Submit your cover letter and resume to careers@ndeavor.org.