Kaden Suderman

Computer Vision & Field Engineer | Physical AI | Industrial Vision

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Professional Experience

Field Engineer - Physical AI, Roboflow
Nov 2025 - Sep 2026

- Built and deployed real-time industrial CV pipelines with Roboflow Workflows, covering annotation, model training, tracking, inference, and application outputs.
- Supported onsite deployments with Fortune 500 manufacturers, configuring edge systems and CV pipelines, troubleshooting customer environments, and working directly with engineering and Center of Excellence teams.
- Provisioned and maintained NVIDIA Jetson systems through flashing, Linux setup, SSH, networking, containers, and remote troubleshooting.
- Specified and tested industrial cameras and edge compute for defect-detection and deployment requirements.
- Built a production hardware inventory and procurement portal tracking over $1M in equipment and satisfying Finance requirements for an additional $2M hardware order.

Computer Vision Engineer Intern, Boston Scientific
Jan - Aug 2023

- Developed classical CV label-detection systems on medical-device manufacturing lines in clean-room environments using Cognex and Keyence vision systems.
- Built OpenCV, scikit-image, and NumPy pipelines that reached approximately 90% detection accuracy in low-contrast conditions.
- Set up and tested industrial cameras, lighting, and vision tools on manufacturing equipment; automated sorting of over 100GB of image data with Python.

Applications Engineer Intern, Analog Devices
May - Aug 2022

- Programmed Arduino and ESP32 systems, flashed firmware with PlatformIO, and debugged hardware over UART/JTAG.
- Built a Python/OpenCV/Pillow image-conversion tool for automated batch processing in hardware simulations.

Selected Projects

CleanSort-CV - Real-Time Waste Classification

- Built a real-time multi-class CV application from camera input through offline inference, object tracking, metrics, and Streamlit dashboard output.
- Deployed the pipeline on a Raspberry Pi 4B for live classification and monitoring.

Master's Thesis - Real-Time Object Segmentation in Embedded Systems

- Built an edge-to-cloud CV system using Raspberry Pi 4B, remote GPU inference, YOLOv8x-seg / FastSAM, BLE, and networked image processing.
- Reached approximately 27-28 FPS with ~400 ms edge-to-cloud return inference.

Education

Master of Engineering (M.E.), Electronic & Computer Engineering - University of Galway (2024) | GPA: 3.85, First Class Honors

Bachelor of Engineering (B.E.), Electronic & Computer Engineering - University of Galway (2023) | GPA: 3.5, Second Class Honors, Grade 1

Analog Devices Elite Scholarship (2022)

Technical Skills

Languages: Python, C, C++, Java, SQL

CV / ML: OpenCV, scikit-image, NumPy, PyTorch, TensorFlow, YOLO, ONNX, TensorRT, Roboflow

Industrial Vision: Basler, LUCID, Cognex, Keyence, SICK, Zebra

Edge / Deployment: Jetson Nano, Orin Nano/NX, AGX Orin, Thor T5000 (Advantech MIC-743, 128GB); Raspberry Pi, Linux, Docker, SSH, Tailscale

Systems: ROS2, Git, Azure, UART, SPI, I2C, TCP/IP, MQTT, HTTP/TLS, RTOS