

LUCAS IVAN KRUGER

COMPUTER VISION AND MACHINE LEARNING ENGINEER

4 years of hands-on experience designing and deploying computer vision and deep-learning solutions in startup and enterprise environments.

Techs: Python, C++, PyTorch, OpenCV, Docker/Nvidia-Docker, YOLO, Azure IoT, Google Cloud, AWS, ClearML, MQTT, ONVIF, Nvidia Jetson

RECENT WORK EXPERIENCE

• Computer Vision & Machine Learning Engineer at HME

May 2024 - Present · **1 yr 8 mos** [Carlsbad, United States] [Applied Computer Vision, B2B]



RESPONSIBILITIES

- Deploy & maintain CV workloads on Jetson Orin Nano Super via Azure IoT Edge.
- Develop and train custom models (vehicle detection, inter-camera RE-ID).
- Define and maintain the full data pipeline (collection, preprocessing, pseudolabeling, labeling).
- Coordinate with external labeling partner: set annotation guidelines, review quality, and ensure on-time delivery.
- Manage experiments, evaluations & deployments with ClearML.

KEY ACCOMPLISHMENTS

- Launched "[Nitro Vision AI](#)" now live in 20+ stores; scaling to hundreds by Q3 2025.
- Achieved 0.90+ mAP-50 on validation/test; reduced false positives by 20% in adverse conditions (snow and rain).
- Developed a production-level RE-ID model to track vehicles across cameras.
- Improved labeling time by 30% using the "exclusion zones" concept in the dataset.

• Computer Vision & Machine Learning Engineer at Agot

Nov 2023 - May 2024 · **8 mos** [Pittsburgh, United States] [Applied Computer Vision, B2B]



RESPONSIBILITIES

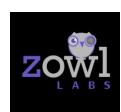
- Deploy and maintain CV projects in JETSON ORIN, JETSON XAVIER, and Google Cloud Run jobs.
- Develop and train custom models (detection, segmentation, key point detection).

KEY ACCOMPLISHMENTS

- Finished production-level project: waste report system (weekly waste reduced in stores).
- Experience using the Google Cloud suite for jobs, metrics, and alarm creation.
- Improved skills in agile methodologies.
- Adapted to an English-speaking environment.

• Computer Vision & Machine Learning Engineer at Zowlabs

Feb 2022 - Nov 2023 · **1 yr 8 mos** [Buenos Aires, Argentina] [Applied Computer Vision, B2B]



RESPONSIBILITIES

- Led small teams in production-level projects.
- Infrastructure for developers: VMs, Nvidia Docker, and Jupyter Notebooks.
- Develop and train custom models using TensorFlow and PyTorch.
- Deploy computer vision systems in NVIDIA JETSON NANO and the cloud (Heroku).

KEY ACCOMPLISHMENTS

- Finished production-level projects: PPE, ADAS, bars segmentation, and danger zone alarms (reducing accidents).
- Created custom datasets for Custom Objects, keypoint detection, and semantic segmentation.
- Improved efficiency by implementing SOTA (State of the Art) models like YOLO v8 or SAM.

EDUCATION

Master's in Computer Science, University of Buenos Aires

March 2017 - June 2026 [Buenos Aires, Argentina]