

Intro to DeepStream NVIDIA JETSON

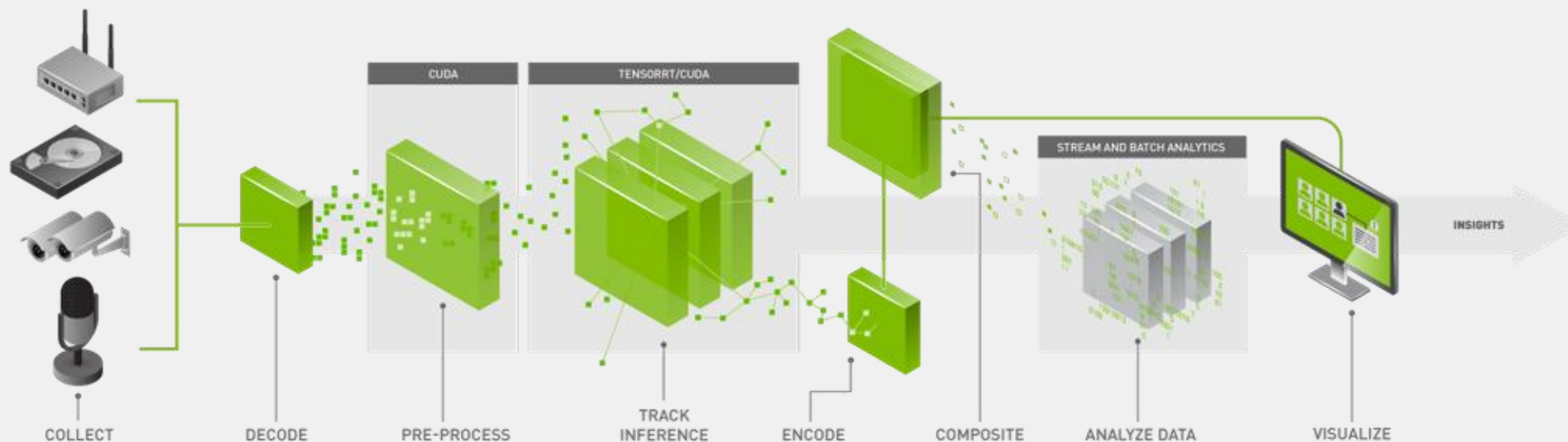


Content

- What is **DeepStream** SDK?
- **DeepStream** key benefits
- What is **JetPack**?
- **DeepStream** and **JetPack** applications
- Environment setup on **Jetson**

DeepStream SDK

AI Framework designed for real-time Video Analytics



DeepStream SDK

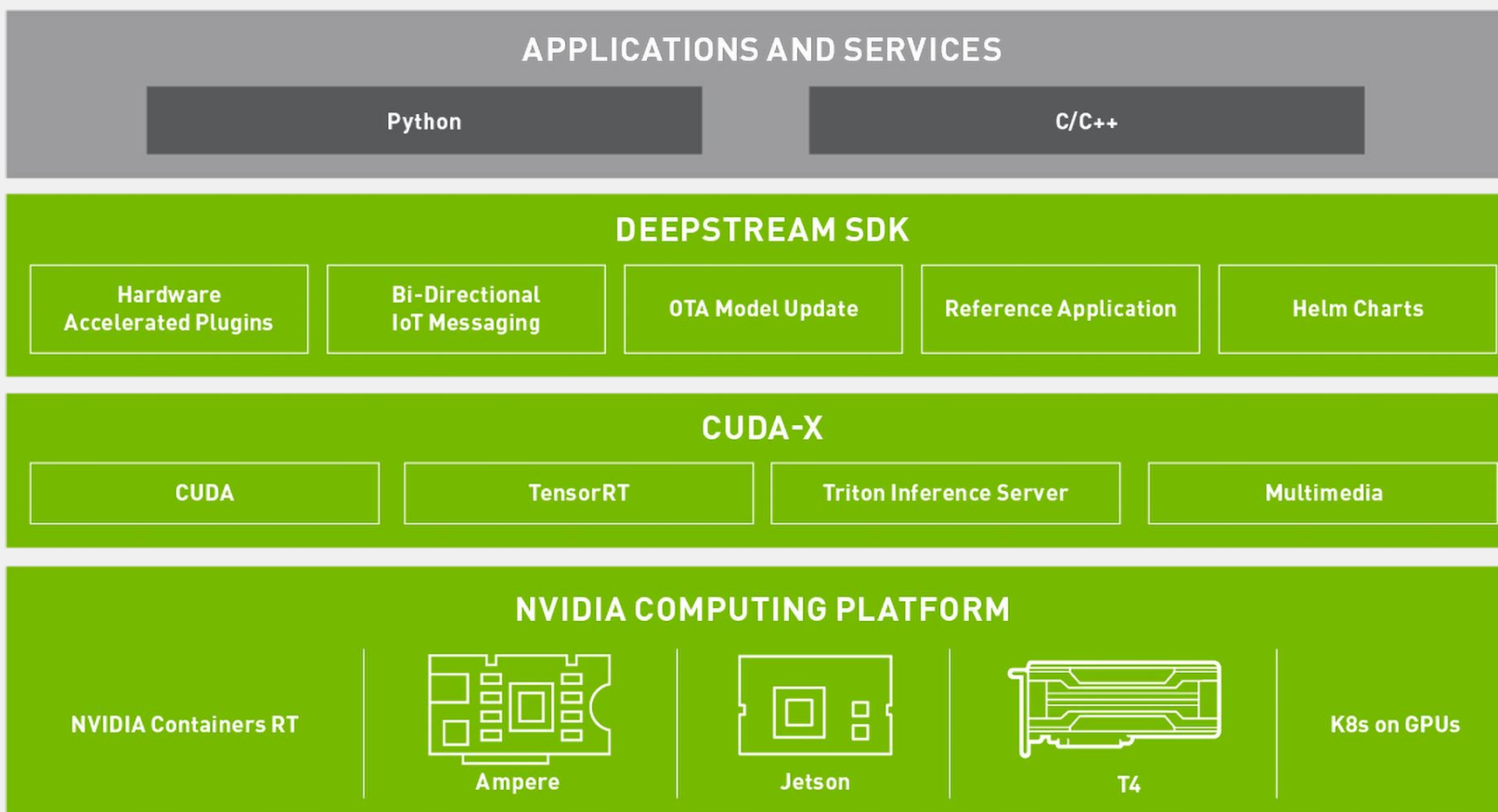
AI Framework designed for real-time Video Analytics

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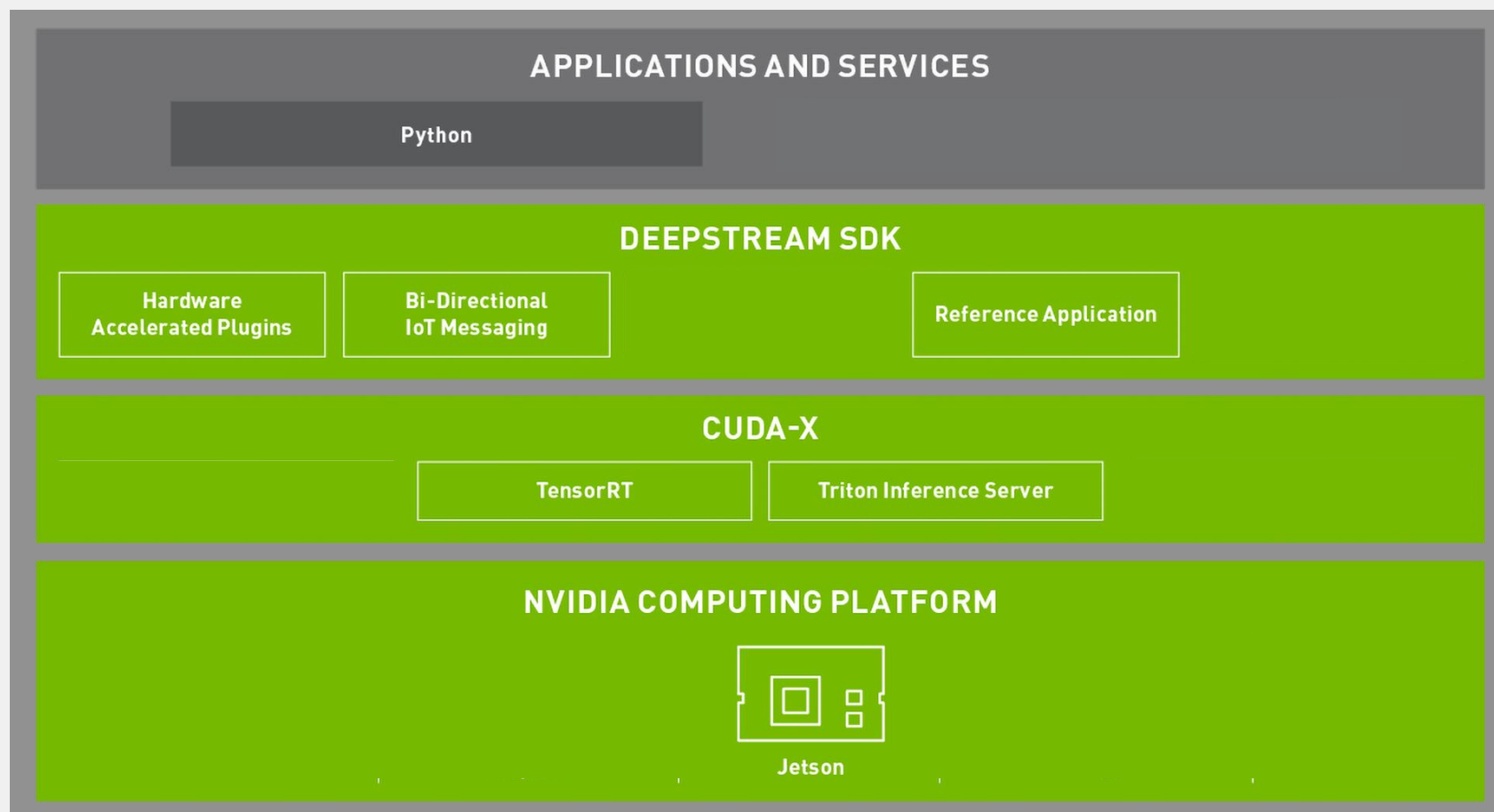
DeepStream SDK

AI Framework designed for real-time Video Analytics



DeepStream SDK

Our focus

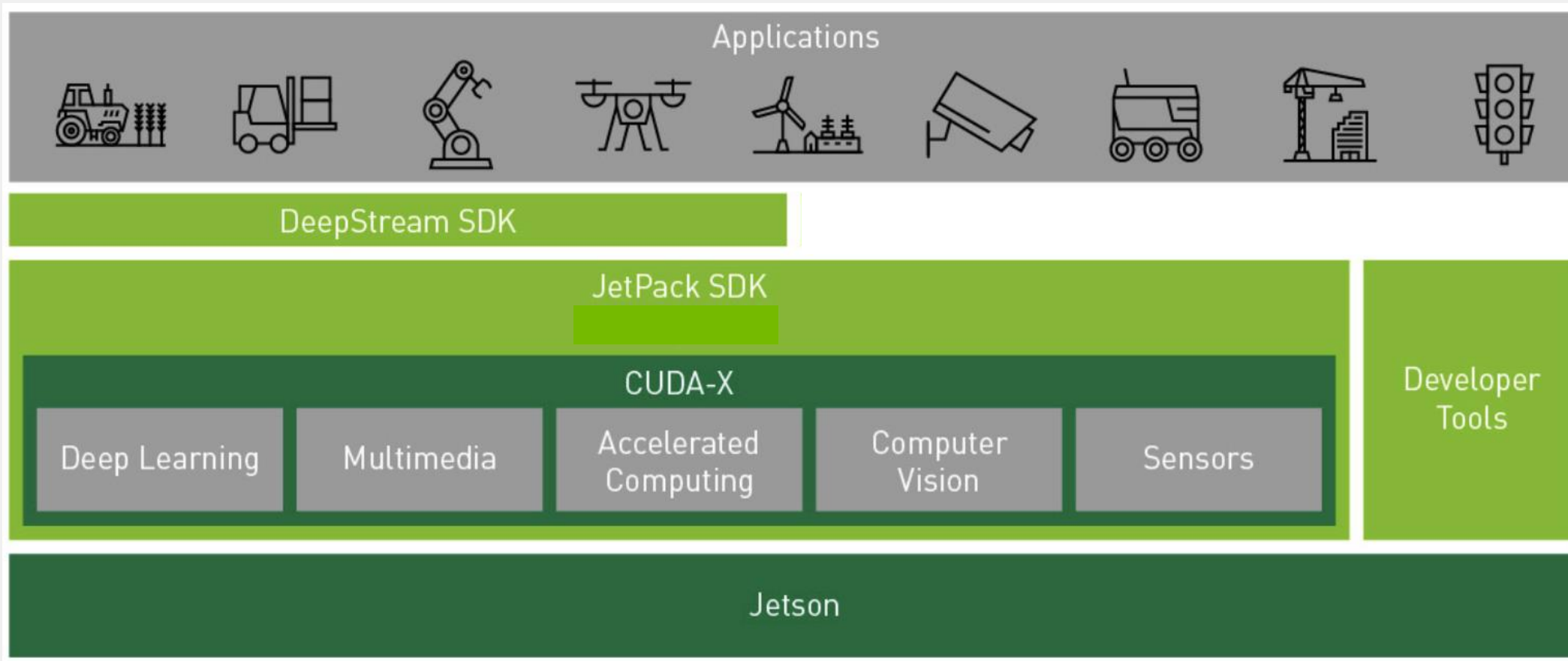


DeepStream SDK

Key benefits:

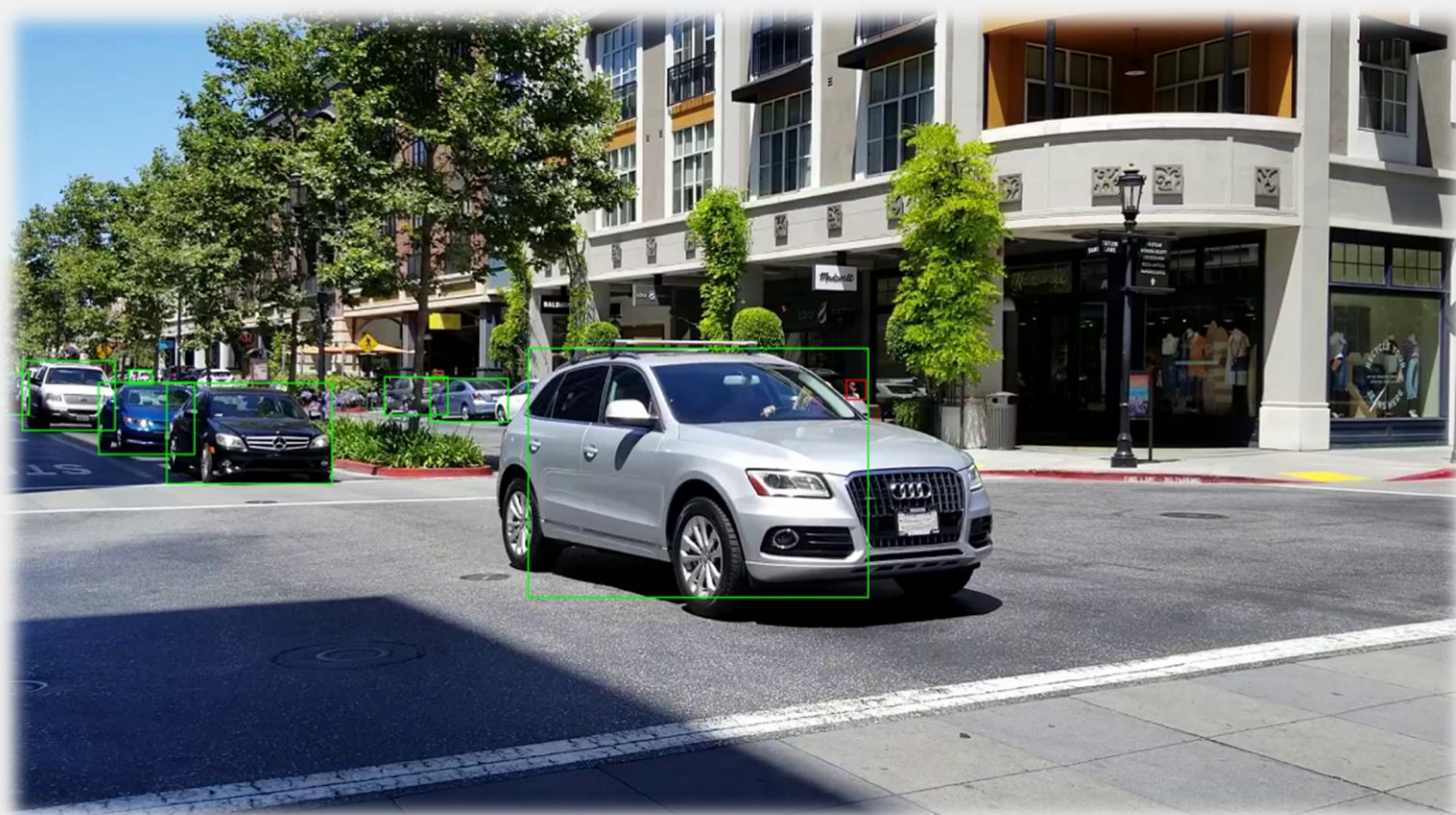
- Hardware Accelerated Plugins (**GStreamer**)
- Pretrained models (**NVIDIA NGC Catalog**)
- Wide support (Triton, PyTorch, TensorFlow, ONNX, TensorRT)
- Provides reference applications for **fast POC**
- Useful built-in features:
 - IoT Messaging
 - OTA Model updates
 - Smart Record

What is JetPack?

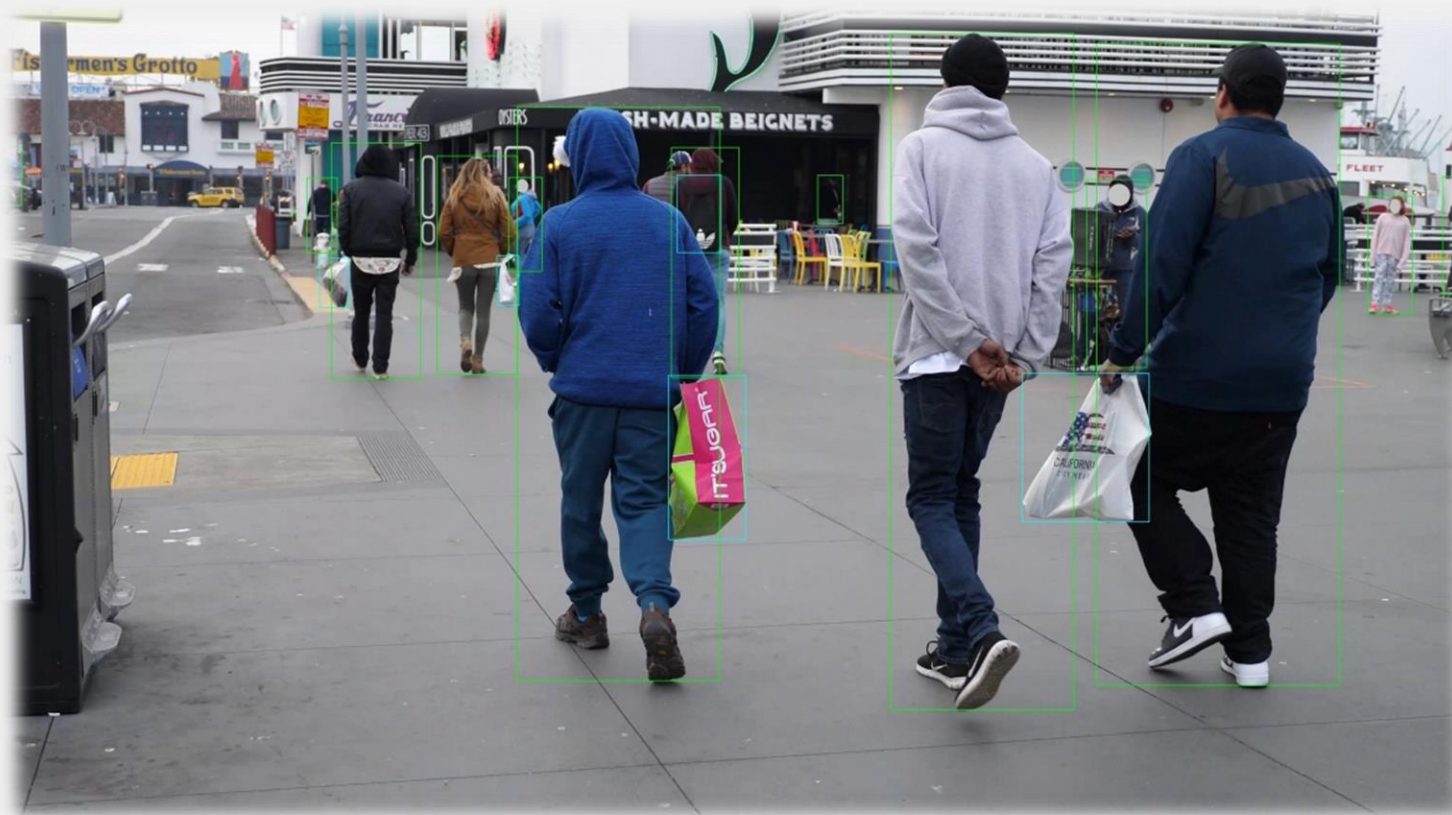


JetPack + DeepStream:

TrafficCamNet

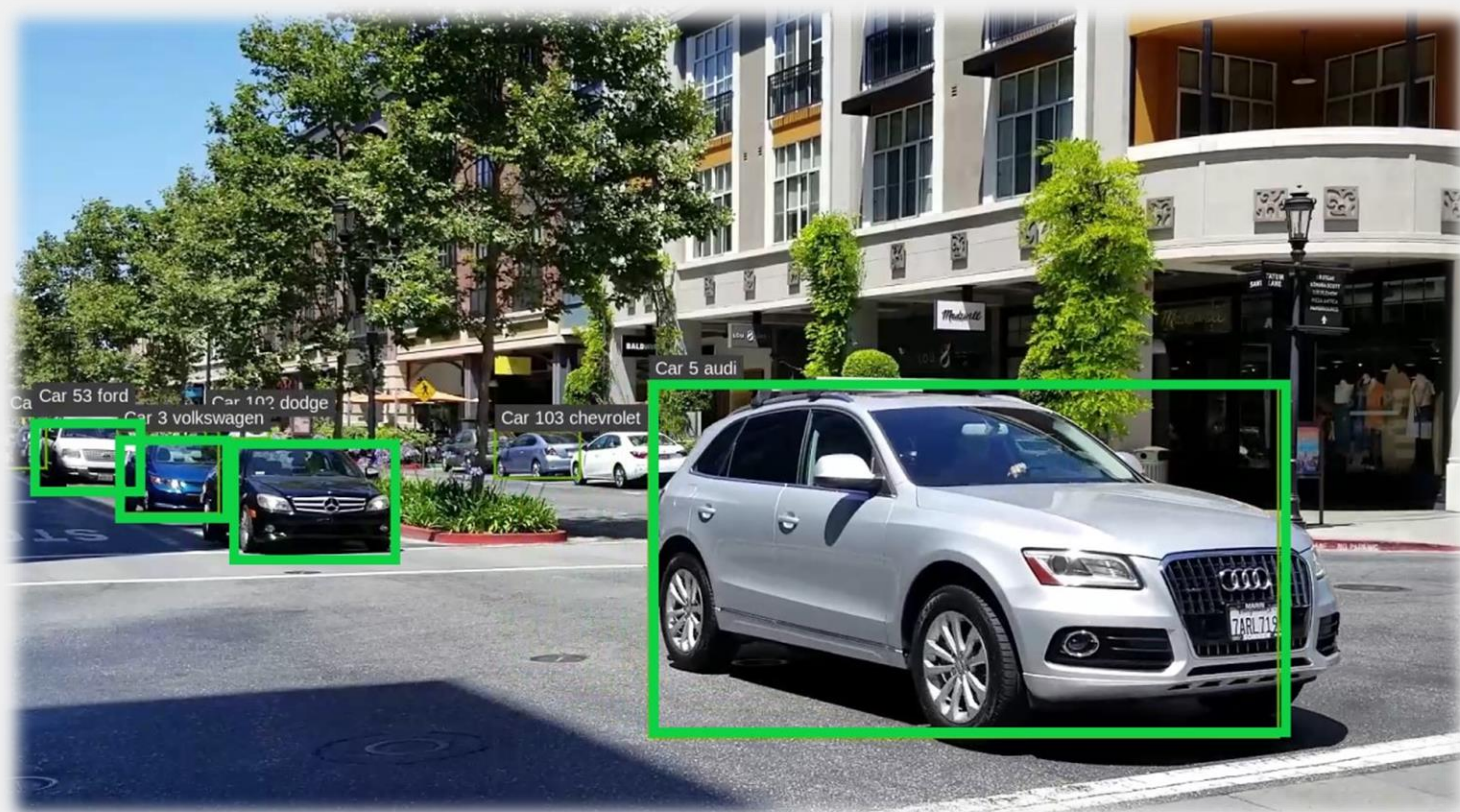


JetPack + DeepStream: PeopleNet



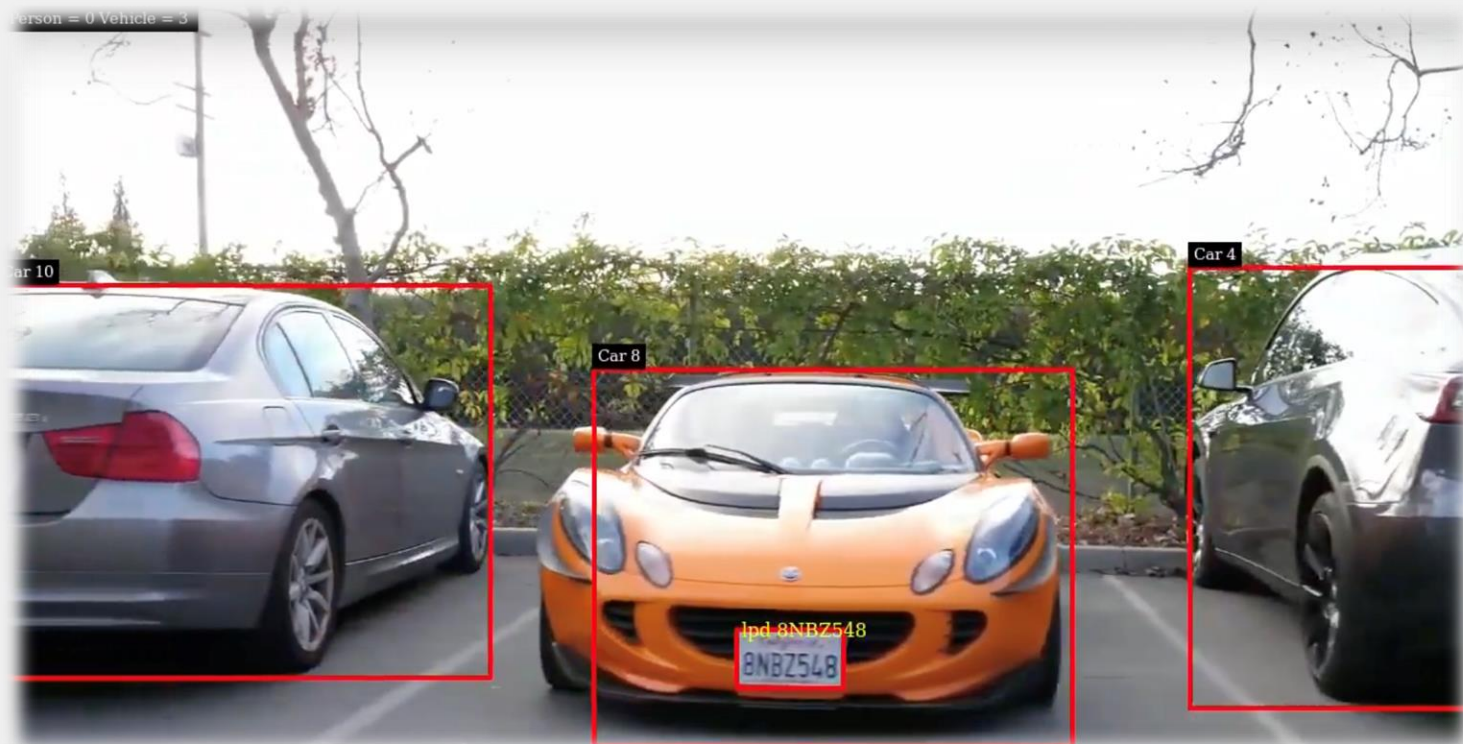
JetPack + DeepStream:

VehicleMakeNet



JetPack + DeepStream:

LicensePlateRecognition



JetPack + DeepStream:

Performance

					Jetson Nano*
Application	Models	Inference Resolution	Precision	Model Accuracy	GPU (FPS*)
People Detect	PeopleNet-ResNet34	960x544	INT8	84%	12
Vehicle Detect	TrafficCamNet-ResNet18	960x544	INT8	84%	19
Vehicle Detect	DashCamNet-ResNet18	960x544	INT8	80%	18
Face Detect	FaceDetect-IR-ResNet18	384x240	INT8	96%	101

Environment setup on **Jetson**

Jetson Nano Developer Kit



Jetson Nano 2GB Developer Kit



Jetson Xavier NX Developer Kit



Thank You