IESTI05 – Edge Al

Machine Learning
System Engineering

10. Object Detection Project:Train & Deploy – Edge Impulse





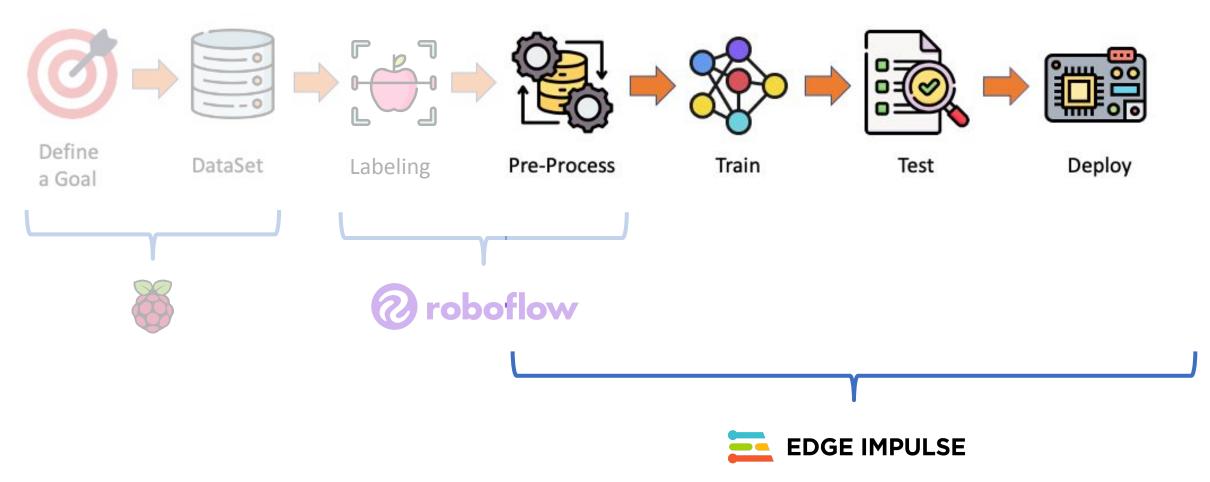


The Goal



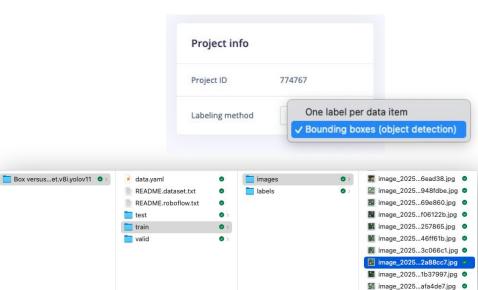


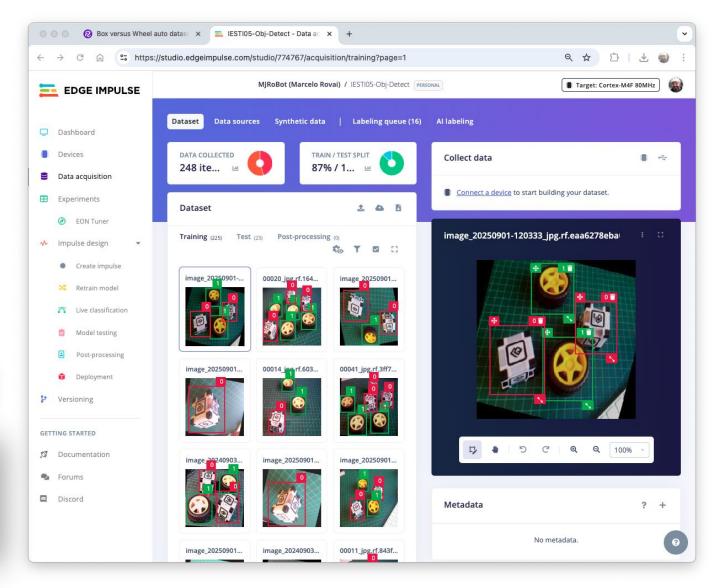
Machine Learning Workflow



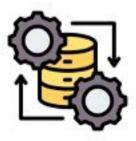
Data Aquisition



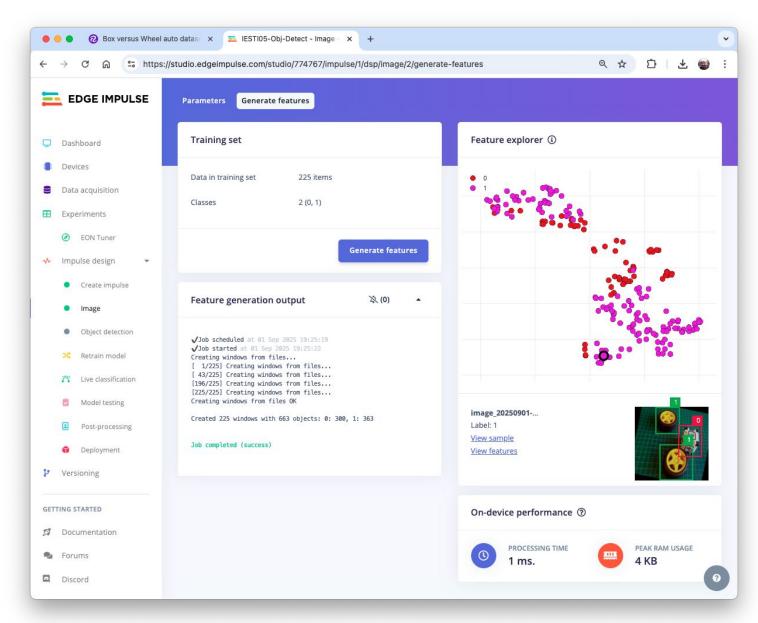




Pre-Processing

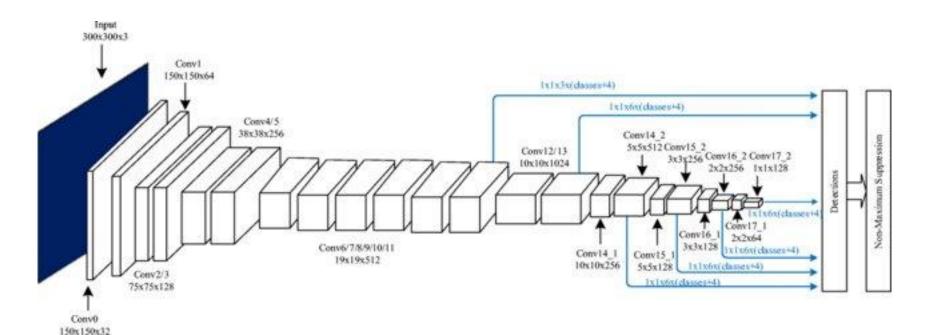




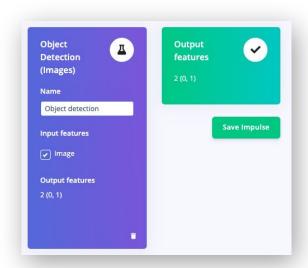


Model





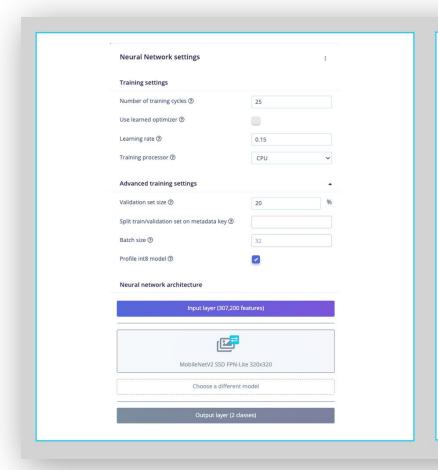
MobileNetV2 SSD FPN-Lite 320x320

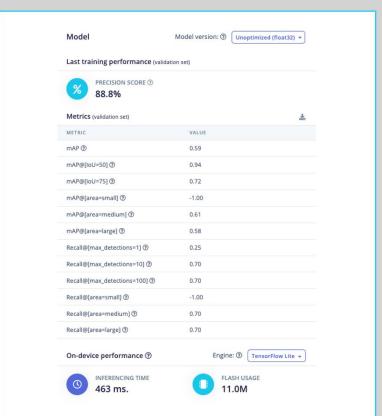


- Base Network (MobileNetV2)
- **Detection Network** (Single Shot Detector or SSD)
- Feature Extractor (FPN-Lite)

Train & Test

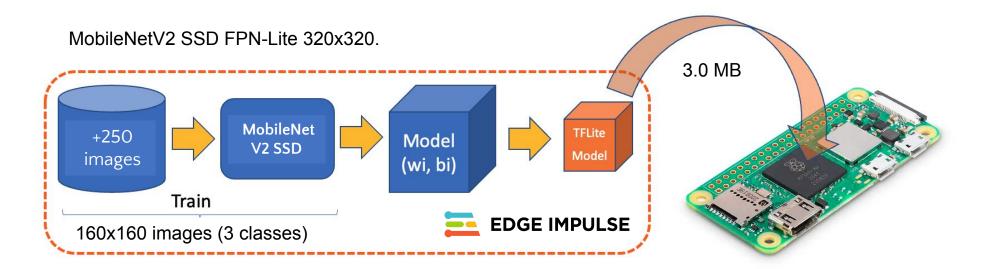


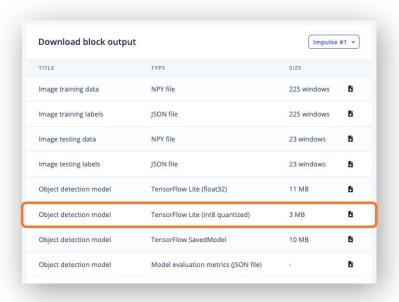




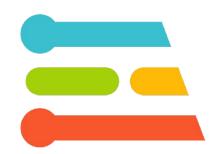
Test -> mAP@[loU=50] 0.81







Edge Impulse Project: Raspi - Object Detection





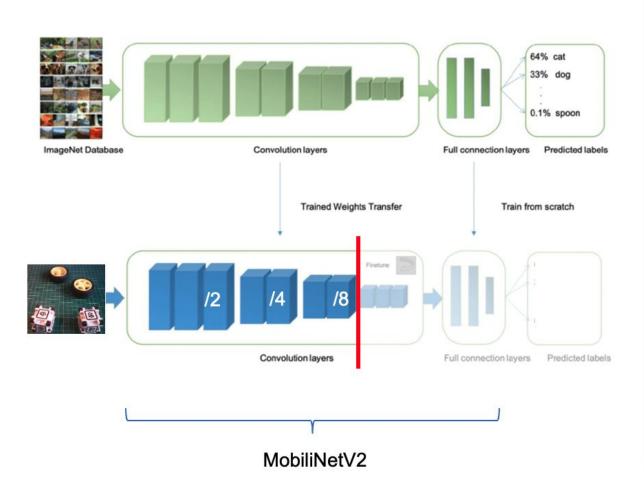
Raspberry Pi Inference:

EI-SSD-MobileNetV2.ipynb

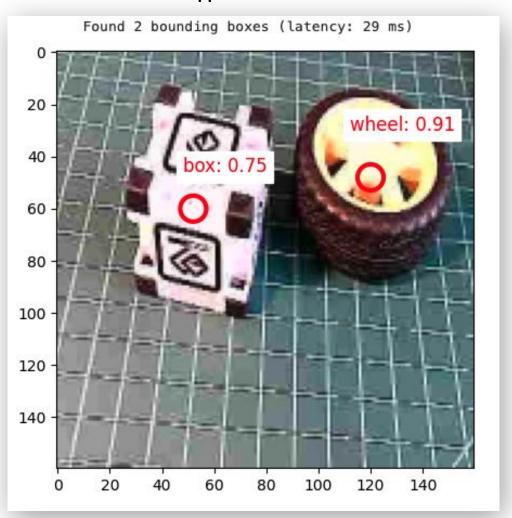




FOMO (Optional)



Approx. 33 FPS



Questions?

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