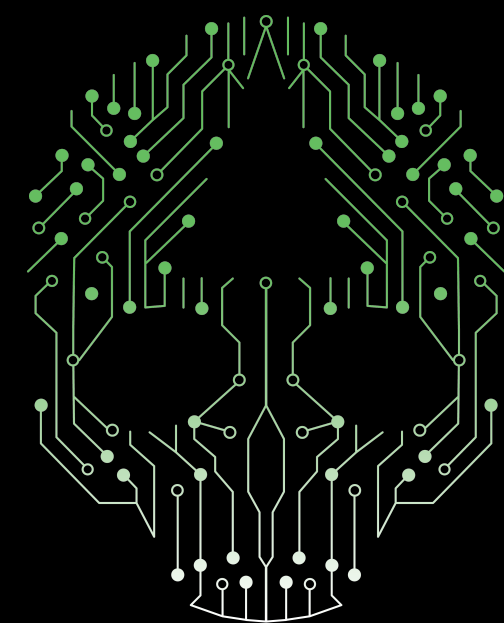


Surveillance Detection

SCOUT

Your Lookout on Autopilot

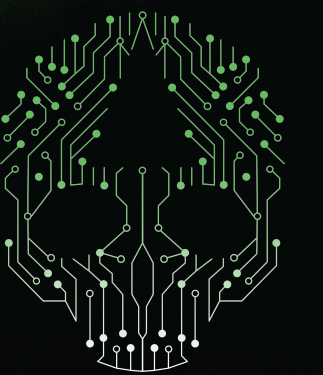


Truman Kain
TEVORA

TL;DR

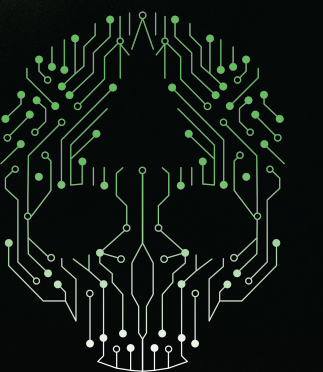
Autopilot cameras are good
for a lot more than driving.

So are Teslas.



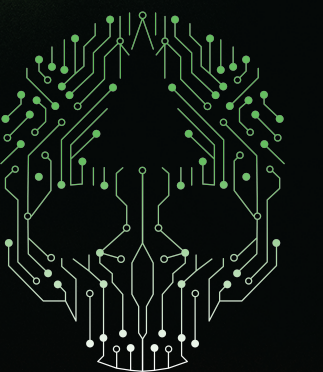
Why Tesla?

- Three Cameras Built In*
- Detailed Vehicle/Owner API
- Sentry Mode (Always On)
- In-Car Web Browser



Surveillance Detection Scout

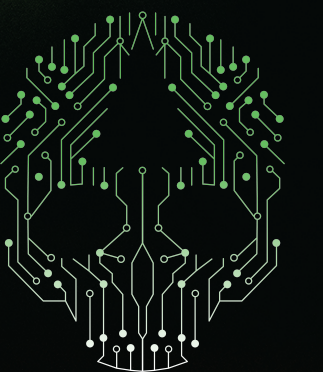
- Real-Time License Plate Recognition
- Real-Time Familiar Face Detection
- Recon/Pattern of Life Querying
- Open-Source & Locally Deployed



“Real-Time” Defined

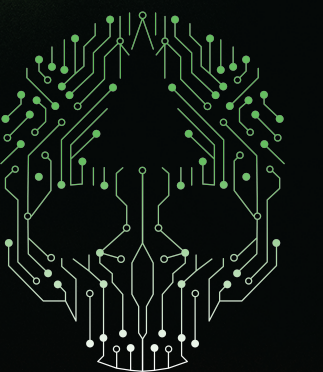


Inference starts
as soon as an
mp4 hits disk*



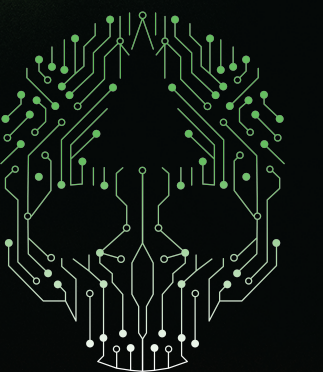
Counter-Surveillance Scenarios

- **While Parked:** Which cars/people are loitering near my house/car?
- **During Your Drive:** How long has that car been behind me? Have I seen that car before?

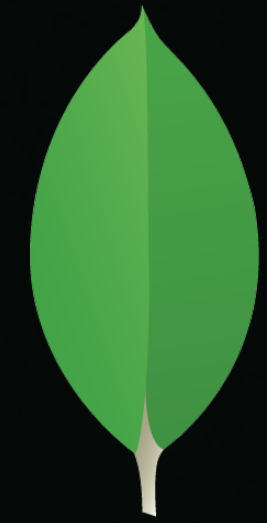


Recon Query Scenarios

- **Tailgating:** What time does my target arrive/leave the office?
- **Lockpicking:** How often does security make rounds? At what hours is the building empty?



Web Stack

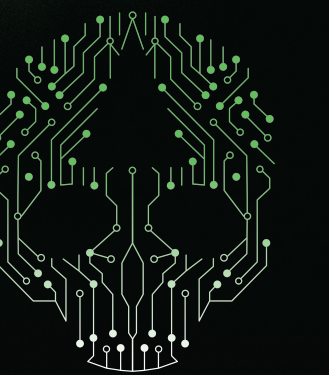


mongoDB®



Vue.js

Express



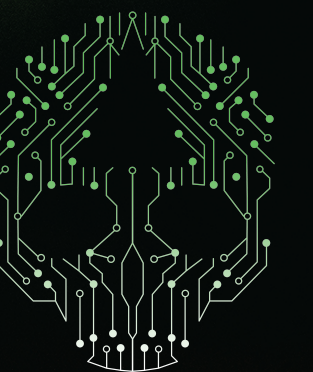
CV Stack



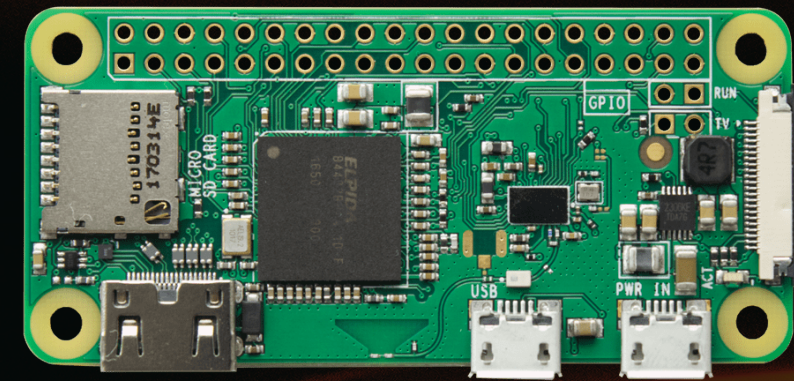
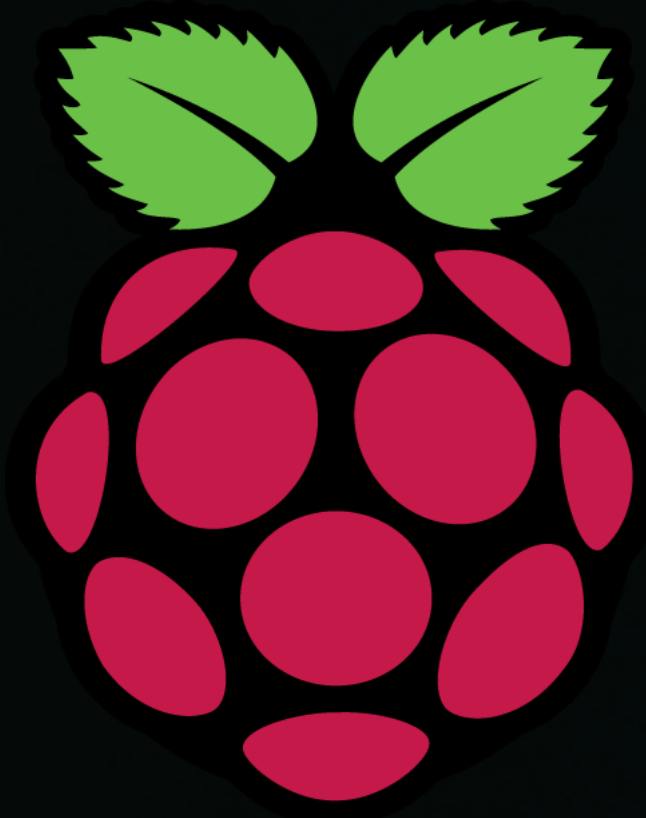
TensorFlow



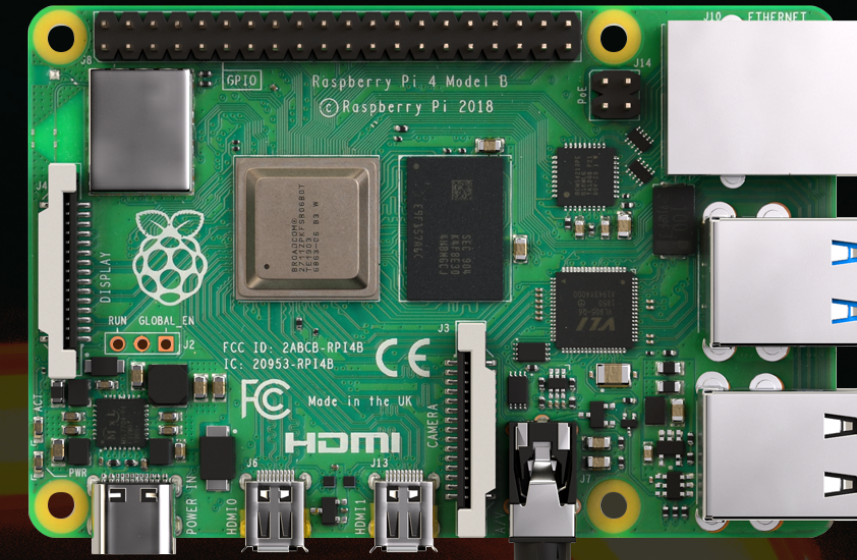
YOLO



Hardware Options



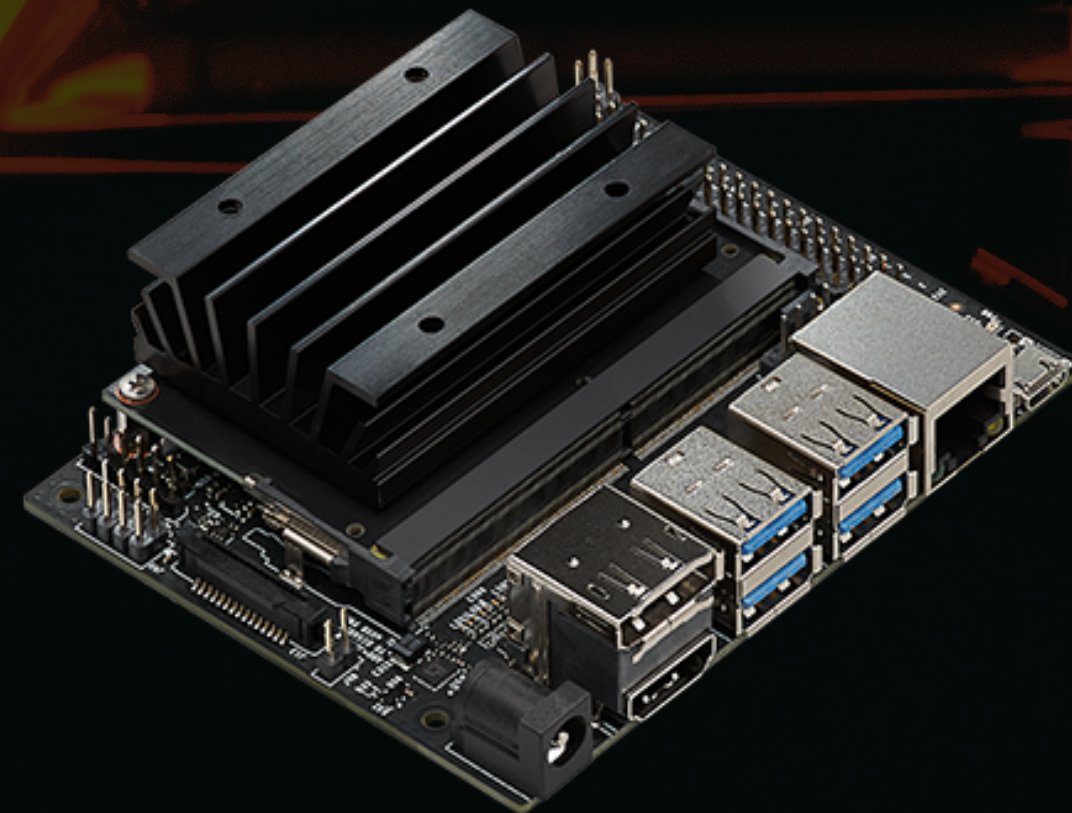
Pi Zero W
\$10



Pi 4B (4GB RAM)
\$55



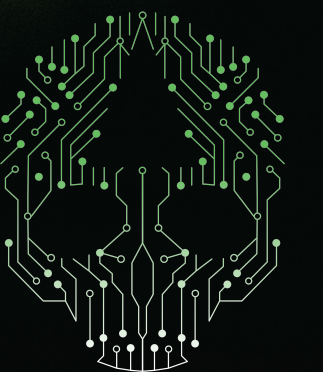
NVIDIA®



Jetson Nano
\$100

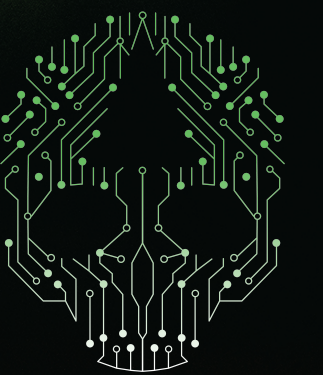
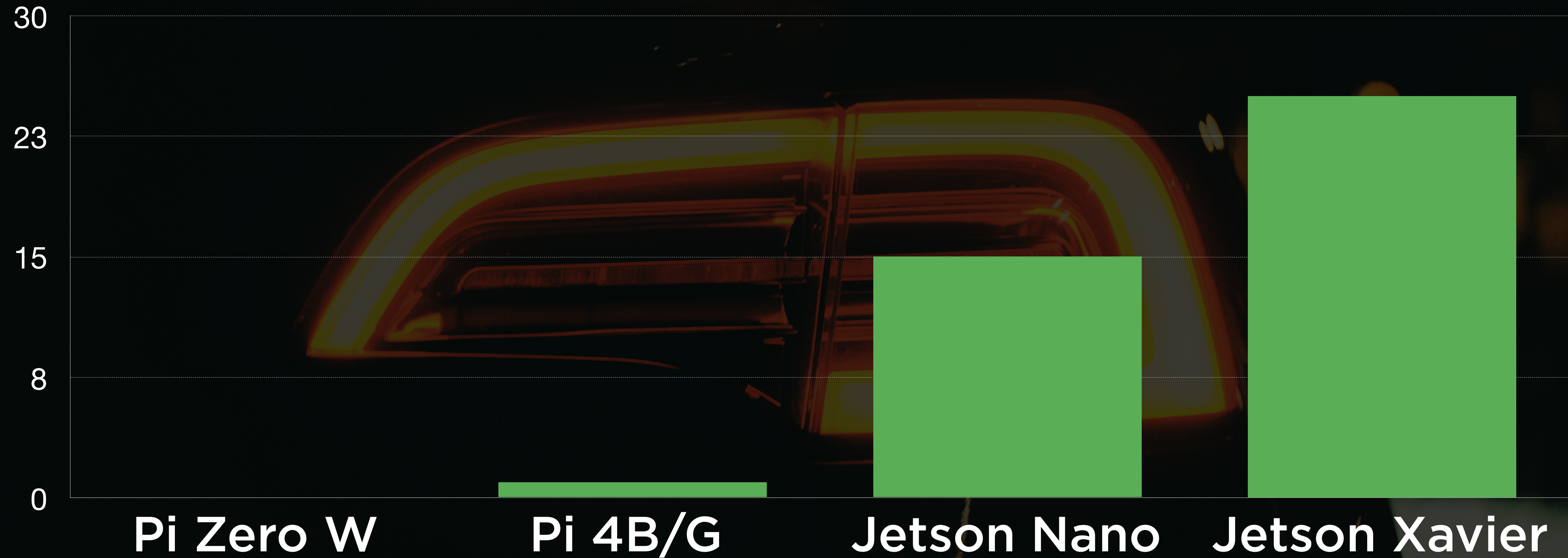


Jetson Xavier
\$700

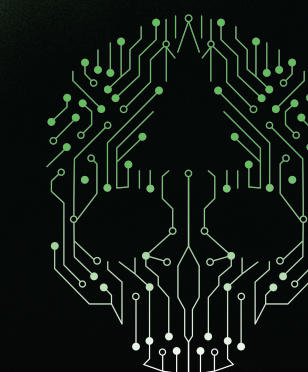


Hardware Benchmarks

Average Inference FPS

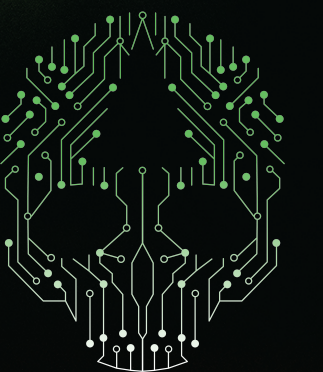


DEMO



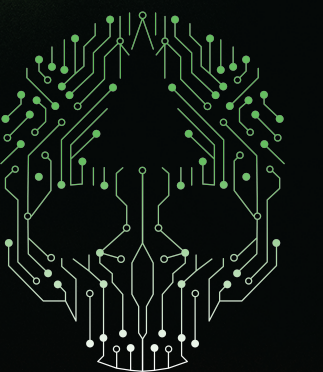
What's Next?

- Remote Live* View
- 3rd Party Dashcams
- Gait Recognition
- More Object Detection
- [Your Request Here]



Privacy Implications (Of the self-driving future)

- Amount of actionable surveillance data will skyrocket
- Private corporations and governments want it
- Breaches will expose it

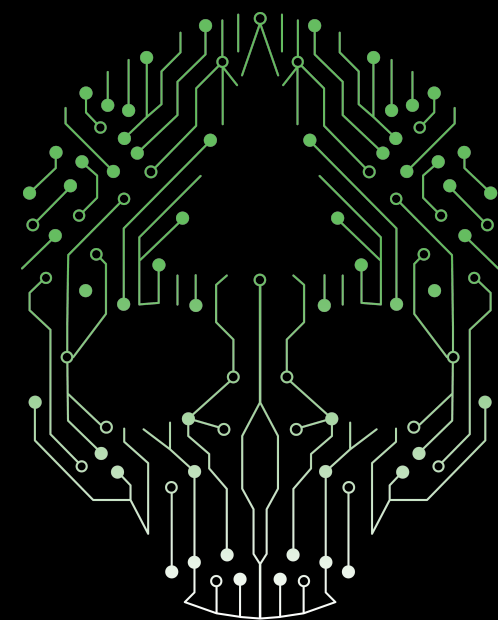


Thank you!

SCOUT

Your Lookout on Autopilot

threat.tevora.com/scout



Truman Kain
TEVORA