

Movidius NCS on Raspberry Pi

Inference on the edge!

Physical Augmentations Rock!



Perceptual Robotics Laboratory (Percro)

Why use Raspberry Pi?

- Sub \$100 system
- Well known commodity hardware
- Lots of OpenCV Computer Vision Demos Online
- TensorFlow does run good enough
- Good platform for a proof of concept

Tensorflow on RPi

Train Cars, Cucumbers, & Many RC Cars!

<https://svds.com/tensorflow-image-recognition-raspberry-pi/>

<https://cloud.google.com/blog/big-data/2016/08/how-a-japanese-cucumber-farmer-is-using-deep-learning-and-tensorflow>

<https://www.youtube.com/watch?v=9QRTg-4q634>

This is cool, but can we do better?

Server / cloud is a still great option with WiFi access...

\$45 AIY Vision Kit:

http://www.microcenter.com/site/content/Google_AIY.aspx?ekw=aiy&rd=1

List of VPUs, TPUs, DSPs, etc:

<https://medium.com/@shan.tang.g/a-list-of-chip-ip-for-deep-learning-48d05f1759ae>

Movidius Neural Compute Stick

Why:

It's just the first

Power & speed

Why Not:

Yea... This edge does make you bleed...

Demos...

How can I help you?

Looking for business partners...

Chicago Area Embedded Deep Learning:

Computer Vision RPi workshop

Pumping Station One

This Sunday 12/17 Noon - 5PM