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Progress Report no.2

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Movidius

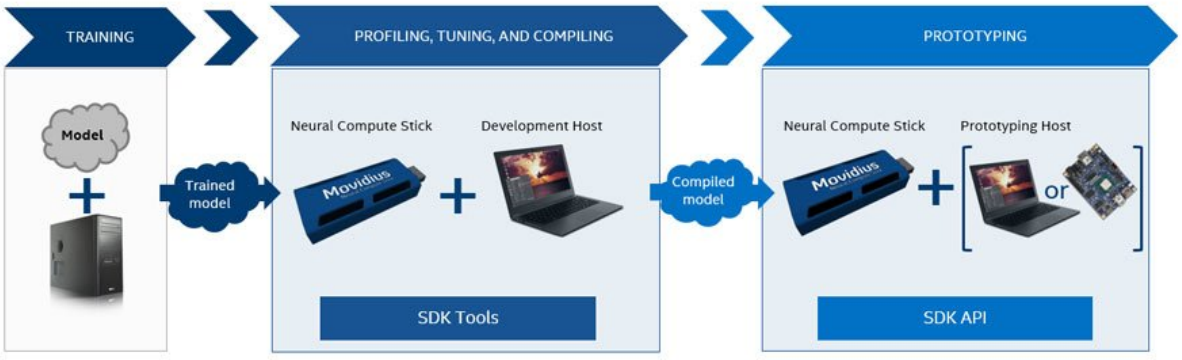
- Simply put, the Movidius NCS is a USB stick for speeding up Deep Learning based analysis or “inference” on constrained devices such as the Raspberry Pi. Think of it as an additional CPU for Deep Learning.
- Physically the NCS is about 7cm x 3cm x 1.5cm with a USB3 Type A connector.

Use Cases for the Movidius NCS

- The NCS is designed for image processing using Deep Learning models. Image processing is very resource intensive and often runs slowly on devices such as the Raspberry Pi.
- With the NCS you can now perform Deep Learning based analysis directly at the Edge / on the Pi. This can save money, bandwidth and power - in addition to potentially decoupling your Edge Device from the internet completely.

Using the Movidius NCS

- The NCS supports both Caffe and TensorFlow based models.
- Using the Movidius NCS is very simple, thanks to a well written SDK. The SDK has two logical components:
  - The **SDK Tools** allows you to convert your trained Deep Learning Model in to a "graph" that the NCS can understand. This would be done as part of the development process.
  - The **SDK API** allows you to work with your graph at run-time - loading your graph onto the NCS and then performing inference on data (i.e. real time image analysis).



Note that the NCS is **not** used for training models!

Plan for the future

- Research how to use Movidius with Raspberry Pi.
- Research how to make a micro-controller using Raspberry Pi with Python.