

Object Recognition

1. Exactly how long did it take for detectnet to recognize your images? Explain why?
 - a. The total runtime for all images was ranging between 217-7743ms depending on the image given. This is probably due to how easy and confident the detectnet software was in finding the objects at hand. I noticed that Network CPU times were a big factor in the runtimes and were working the most in detecting the objects.
2. What is the highest and lowest percent confidence for your selected class?
 - a. Highest was 98.0% and lowest was 55.1%
3. Out of all the images you tested, which took the longest?
 - a. The airplane image took the longest with 7742.48ms total CPU runtime.
4. Which component has a greater latency for image processing: CUDA or CPU? Please show the latency and explain why.

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root@group7-desktop: /jetson-inference/build/aarch64/bin
[OpenGL] glDisplay -- set the window size to 500x375
[OpenGL] creating 500x375 texture (GL_RGB8 format, 562500 bytes)
[cuda] registered openGL texture for interop access (500x375, GL_RGB8, 562500 bytes)
[image] saved 'images/test/dog_0_0.jpg' (500x375, 3 channels)

[TRT] -----
[TRT] Timing Report networks/SSD-MobileNet-v2/ssd_mobilenet_v2_coco.uff
[TRT] -----
[TRT] Pre-Process   CPU    0.17021ms   CUDA    1.22198ms
[TRT] Network       CPU  2673.40210ms  CUDA  2672.03833ms
[TRT] Post-Process  CPU    0.13599ms   CUDA    0.12964ms
[TRT] Visualize     CPU   64.05538ms   CUDA   64.31864ms
[TRT] Total        CPU  2737.76367ms  CUDA  2737.70850ms
[TRT] -----

[TRT] note -- when processing a single image, run 'sudo jetson_clocks' before
to disable DVFS for more accurate profiling/timing measurements

[image] imageLoader -- End of Stream (EOS) has been reached, stream has been closed
detectnet: shutting down...
detectnet: shutdown complete.
root@group7-desktop: /jetson-inference/build/aarch64/bin#
  
```

- a. Using the dog time as an example, it seems that the CPU had greater latency than the CUDA overall. This can be because a CPU is generally optimized to do fewer general tasks that can't really handle the parallel processing CUDA can with its GPU processing.
5. Add screenshot of detectnet with 2 or more objects

