This checklist must be submitted as a PDF as part of your submission.

Name of Certifying Engineer(s): **Cedric Nugteren**
Email of Certifying Engineer(s): **cedric@plumerai.com**
Name(s) of System Under Test:
NUCLEO_L4R5ZI, CY8CPROTO_062_4343w, DISCO_F746NG, B_U585I_IOT02A

Division (check one):

- ❑ Open
- ✓ **Closed**

Category (check one):

- ✓ **Available**
- ❑ Preview
- ❑ Research, Development, and Internal (RDI)

Benchmark(s) (check all that apply):

- ✓ **Visual Wake Words**
- ✓ **Keyword Spotting**
- ✓ **Anomaly Detection**
- ✓ **Image Classification**

Please fill in the following table adding lines as necessary:

System Under Test Name	Benchmark	Accuracy/AUC
NUCLEO_L4R5ZI	VWW	Top-1: 84.9% (target = 80%)
NUCLEO_L4R5ZI	KWS	Top-1: 90.2% (target = 90%)
NUCLEO_L4R5ZI	AD	AUC: 0.86 (target = 0.85)
NUCLEO_L4R5ZI	IC	Top-1: 88.0% (target = 85%)
CY8CPROTO_062_4343w	VWW	Top-1: 84.9% (target = 80%)
CY8CPROTO_062_4343w	KWS	Top-1: 90.2% (target = 90%)
CY8CPROTO_062_4343w	AD	AUC: 0.86 (target = 0.85)
CY8CPROTO_062_4343w	IC	Top-1: 88.0% (target = 85%)
DISCO_F746NG	VWW	Top-1: 84.9% (target = 80%)
DISCO_F746NG	KWS	Top-1: 90.2% (target = 90%)
DISCO_F746NG	AD	AUC: 0.86 (target = 0.85)
DISCO_F746NG	IC	Top-1: 88.0% (target = 85%)

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B_U585I_IOT02A	VWW	Top-1: 84.9% (target = 80%)
B_U585I_IOT02A	KWS	Top-1: 90.2% (target = 90%)
B_U585I_IOT02A	AD	AUC: 0.86 (target = 0.85)
B_U585I_IOT02A	IC	Top-1: 88.0% (target = 85%)

For each SUT, is the benchmark Accuracy/AUC target met? (Not a requirement for the Open division) (check all that apply):

- ✓ **Yes** (Visual Wake Words … 80% Accuracy)
- ✓ **Yes** (Keyword Spotting … 90% Accuracy)
- ✓ **Yes** (Anomaly Detection … 0.85 AUC)
- ✓ **Yes** (Image Classification ... 85% Accuracy)
- ❑ No, for some combination of benchmark, scenario and SUT

For each SUT and benchmark, did the submission run on the whole validation set in accuracy mode? (check one):

- ✓ **Yes**
- ❑ No

For each SUT and benchmark, does the submission use the EEMBC Runner? (check one)

- ✓ **Yes**
- ❑ No

For each SUT and benchmark, is the same code run in accuracy and performance modes? (check one)

- ✓ **Yes**
- ❑ No

Are the weights calibrated using data outside of the official calibration set? (check one)

- ❑ Yes
- ✓ **No**

What numerics does the submission use? (check all that apply)

- ❑ INT4
- ✓ **INT8**
- ❑ INT16
- ❑ UINT8
- ❑ UINT16
- ❑ FP11
- ❑ FP16
- ❑ BF16
- ❑ FP32
- ❑ Other, please specify:

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What backend does the submission use? (check all that apply)

- ✓ Vendor backend, please name: **Plumerai Inference Engine 2022.09**
- ❑ TF-Lite Micro
- ❑ Micro TVM
- ❑ Other, please specify:

Which of the following caching techniques does the submission use? (check all that apply, ideally none):

- ❑ Caching Inputs between iterations
- ❑ Caching responses between iterations
- ❑ Caching intermediate computations between iterations

Which of the following techniques does the submission use? (check all that apply, ideally none if submitting to the closed division.)

- ❑ Quantization aware training
- ❑ Wholesale weight replacement
- ❑ Weight supplements
- ❑ Discarding non-zero weight elements
- ❑ Pruning
- ❑ Modifying weights during the timed portion of an inference run
- ❑ Hard coding the total number of queries
- ✓ **None of the above**

Is the submission congruent with all relevant MLPerf rules?

- ✓ **Yes**
- ❑ No

If the answer to the above question is no, please explain:

For each SUT, have you filled out the JSON system description file?

- ✓ **Yes**
- ❑ No

For each SUT, does the submission accurately reflect the real-world performance of the SUT?

- ✓ **Yes**
- ❑ No

Does your submission include the following: (check all that apply)

- ✓ **System description file**
- ✓ **Code that implements the benchmarks**
- ❑ Code/scripts that train the model(s) (Open Division)
- ❑ Metadata that describes each system-implementation combination tested
- ❑ Scripts that set up and execute each system implementation tested
- ✓ **Result logs for each system implementation tested**
- ✓ **This Checklist**