



## OpenNN Performance Assessment Summary

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**The OpenNN Audit found the application to be well balanced across the threads and makes good use of OpenMP. The use of hyperthreading was shown to provide benefit but is somewhat limited due to the shared cache. The performance of OpenNN is being further investigated at larger scales in a POP Performance Plan.**

OpenNN (Neural Designer) is an open source C++ code for neural networks that has OpenMP parallelisation. In this POP Audit it was found to run 1.5 times faster on 4 threads compared with 2 threads. The main limit on the performance is the extra computation due to an unexpected increase in the number of function invocations with more threads.

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A full technical report can be found at [https://pop-coe.eu/sites/default/files/pop\\_files/pop-ar-opennn.pdf](https://pop-coe.eu/sites/default/files/pop_files/pop-ar-opennn.pdf)

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**Notices:**

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