Tencent Cloud

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1.89X speed up of the custom pWaveNet model using Bfloat (BF16) versus FP32.[1]

1.54X speed up of the custom WaveRNN model using BF16 versus FP32.[2]

Enhanced Real-time Speech Synthesis for Tencent Xiaowei Intelligent Speech and Video Platform

Tencent is working on the development of the Xiaowei intelligent speech and video service access platform. The platform, with vText to Speech (TTS) based on a neural-based vocoder, performs high-quality TTS conversion and delivery via end-to end acoustic models. In collaboration with Intel, Tencent developed the Parallel WaveNet and WaveRNN custom vocoder model solutions to provide the platform with exceptional TTS performance while effectively reducing the total cost of ownership. The solutions use 3rd Gen Intel® Xeon® Scalable processors integrated with BFloat extensions and Intel® Advanced Vector Extensions 512 which greatly reduces access to memory and supports hardware acceleration when working in conjunction with the Intel® oneAPI Deep Neural Network Library.

"With the support of the advanced hardware and software technologies from Intel, the custom solutions based on the 3rd Gen Intel® Xeon® Scalable processors have unleashed the platform's speech synthesis performance."

Qiao Tian, Senior Researcher, Tencent Cloud

Products and Solutions
3rd Gen Intel® Xeon® Scalable Processors
Intel® Deep Learning Boost
Intel® oneAPI Deep Neural Network Library

Industry
IT Services and IT Consulting

Organization Size
10,001+

Country
China

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Case Study

1,2 For more complete information about performance and benchmark results, visit https://www.intel.com/content/www/us/en/customer-spotlight/stories/tencent-speech-synthesis-customer-story.html