

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

“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**

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.

Products and Solutions

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