Ultra-low power key word spotting

Presenters:

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Items presented:

1. Consumer electronics driven by DSP Group ultra-low power wake word inference processors.
2. Next generation inference processing unit EVB and SDK

Relevance to TinyML:

The items presented demonstrate:

1. DSP Group's expertise bringing edge AI processing to mass production consumer electronics markets.
2. Next generation innovation bringing complex AI technology into sub-mW inference processors, driving future ML edge devices.

This demonstration will show how DBM10, a general purpose ultra-low power AI inference processor from DSP Group Ltd, can perform various types of inference at the edge in real-time, consuming sub mW of power.

The demonstration will show a full end to end inference systems, working on well-known models in TensorFlow, Keras and other formats.

DBM10's SDK will be demonstrated, reading the pre-trained model, quantize its weights, perform optimization using pruning and entropy compression advanced algorithms, and producing efficient executable files for the inference processor.