

The Human Processing Unit (HPU) as a New Approximate Computing Substrate

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Problem

Image
Compression

Edge
Detection

Triangle
Intersection
Detection

Problem

Image
Compression

Edge
Detection

Triangle
Intersection
Detection

Application

JPEG 2000

Sobel

Jmeint

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JPEG 2000

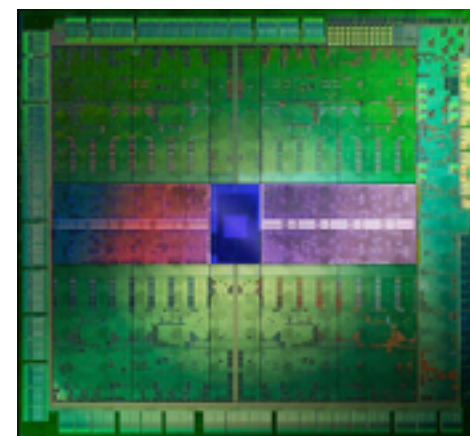
Sobel

Jmeint

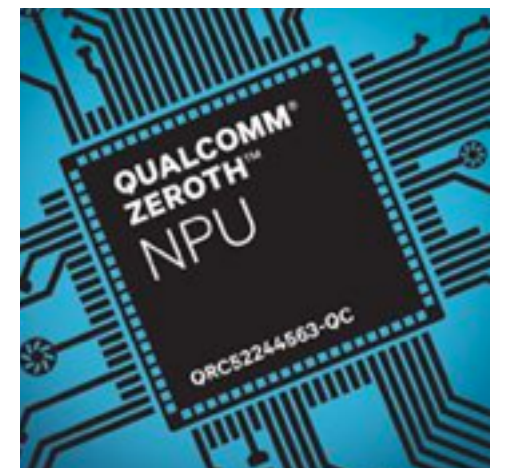
Computing
Device



CPU



GPU



NPU

Problem

Word
Processing

Image
Recognition

Fuzzy Information
Retrieval

Application

Computing
Device

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HPU

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How do we program HPU
while ensuring quality???

Computing
Device



HPU