

VegasFlow: accelerating Monte Carlo simulation across multiple devices

We present VegasFlow, a new software for fast evaluation of high dimensional integrals based on Monte Carlo integration using Google's TensorFlow library.

VegasFlow enables developers to delegate all complicated aspects of hardware and platform implementation to the underlying library so they can focus on the problem at hand.

VegasFlow automatically offloads the integration algorithm and (when possible) the integrand to GPU (or TPUs if available) resulting on up to a 10x improvement with respect to equivalent implementations.

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Session Classification: Software