

## Object-Oriented Zero-Information-Optimised Product of Monte Carlo Integrations

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We propose an object-oriented Monte Carlo framework for computation of definite integrals with a primary focus on generality. We introduce an optimised sampling method for a product of Monte Carlo integrations. The method does not require any a-priori knowledge of the integrands or the integration domains, and can be combined with other optimisation methods. Using the object-oriented framework, we implement a naive uniform sampling method and the optimised one, and empirically compare them on the Monte Carlo computation of volumes of N-dimensional balls. The experiments confirm our theoretical expectations.

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