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Automatic Differentiation of Higher-Order Functions

New Automatic Differentiation methods increase computational efficiency and reduce memory requirements for deep learning and other complex computing systems.

Researchers at Purdue University have developed methods of Automatic Differentiation (AD) to be applied to both rigid computations and arbitrary computer programs. This technology greatly increases the efficiency of these processes while also reducing the amount of required computer memory, allowing for more complicated deep learning systems.

Advantages:

-Efficient

-Versatile

Potential Applications:

-Application Programmers

-Machine Learning

-AI

TRL: 5

Intellectual Property:

Provisional-Patent, 2019-04-29, United States | PCT-Gov. Funding, 2020-04-29, WO | NATL-Patent, 2021-10-28, United States | NATL-Patent, N/A, Europe | EP-Patent, N/A, Switzerland | EP-Patent, N/A, Germany | EP-Patent, N/A, United Kingdom

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Artificial Intelligence & Machine Learning/Reinforcement & Federated Learning
Artificial Intelligence & Machine Learning/AI Model Optimization & Acceleration Tools

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