Mini-Workshop: Differentiable Programming for High-Performance, Data-Intensive Computations

Wrap-Up / Next Steps

Marco Foco, NVIDIA
William Moses, MIT
Vassil Vassilev, Princeton

Challenges

Which are the domains where differential programming can really a make difference? Data Science, Computer Graphics, Physics?

Can implementers and expert users exchange knowledge and ideas?

Is there an effective way to enable high-performance differentiable programming for the broader domain of Data Science?

What is the best way forward for first class AD support for high-performance languages such as C++?

Possible Next Steps

Organize similar events to engage other scientific use cases

Possible approaches towards formulating synergistic activities:

- Gather interest in working on a white paper on high-performance AD in Data Science

- Improve proposal to C++ standards committee P2072 (P2072R1: Differentiable programming for C++)

If you want to share your knowledge/experience with AD please let us know!

Discussion

Thank you!