Ray: A Distributed Framework for Emerging AI Applications

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Overview

The paper introduces a distributed framework called Ray for reinforcement learning applications.

Reinforcement learning requires many simulations which requires a large amount of compute.
Background

Not enough throughput: Map-Reduce, Apache Spark, Dryad, Dask, CIEL

Static Computation Graphs: TensorFlow, Naiad, MPI, Canary
Motivation

- High throughput, low latency.
- Dynamic graph computation.
What did they do?

Actor programming
Global Control Store
Scheduler
Fault tolerance
Ease of programming
Opinion

Limited comparison to other systems

Not exploring beyond RL