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Trainee-led: Overview of HAC

Monday 14 October 2024 10:45 (15 minutes)

Algorithm and Hardware Co-Development (HAC) is a key focus area within A3D3, supporting the institute's mission to build accelerated AI solutions for scientific discovery. Our team develops AI algorithms to address significant challenges in data-driven research, including data irregularity, label scarcity, and the complexity of understanding AI models, while also providing efficient hardware implementations to optimize these algorithms. In this presentation, I will provide an overview of the developments in HAC, including our efforts to meet strict computational requirements such as low latency and high throughput. I will also discuss our progress in developing hardware design automation tools, which enable domain experts to more easily integrate their AI models into hardware platforms. Together, these innovations form the foundation for supporting various fields, from high-energy physics to neuroscience.

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