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Integration of quantum computing into transformer architectures for High Energy Physics

This presentation delves into integrating quantum computing into transformer architectures to enhance High Energy Physics (HEP) analysis performance. By encoding classical HEP data into quantum states using a quantum-trainable circuit, we aim to harness the strengths of both quantum and classical computing. This hybrid approach is designed to improve data processing and analysis. The implementation ensures compatibility with both CPUs and GPUs, highlighting the potential of quantum-enhanced transformer models in scientific research.

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