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(57) Abstract :
This study presents a novel method for distributed training of deep learning models using Gated Recurrent Unit (GRU) networks, coupled with integrated version control to enhance collaboration and reproducibility. The method addresses challenges in distributed environments, including synchronization overhead and gradient updates, by introducing an optimized framework that ensures efficient node communication and load balancing. The inclusion of version control streamlines model iteration management, enabling real-time updates, error tracking, and rollback functionalities. Experimental results demonstrate the proposed method's scalability, efficiency, and accuracy compared to traditional centralized training approaches.

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