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Data Velocity: Polars Meets GPU Power

Pashlene Naidoo (Stellenbosch University)

Fri, 15 November 2024 | 12h00-12h30 SAST

Attend online

ABSTRACT

Pandas is widely used for data analysis in Python; however, it faces performance limitations with large datasets due to its single-threaded, memory-bound design. In contrast, Polars is built with Rust and optimised for multi-threaded execution, making it faster and more memory-efficient. Additionally, we will explore Nvidia's RAPIDS ecosystem to leverage the power of Nvidia GPUs. The goal of this session is to provide participants with a foundational understanding of Polars and to demonstrate the significant performance benefits of using Polars with GPU support on large datasets.

BIOGRAPHY

Pashlene is a first-year Masters student in the Quantum Research Group at Stellenbosch University, under the supervision of Dr Yaseera Ismail. Her current research focuses on the investigation of high-dimensional encoding for Quantum Communication. Pashlene completed her BSc and BSc (Honours) at the University of KwaZulu-Natal, majoring in Applied Physics.



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